DOCUMENT RESUME

ED 275 711 TM 860 623

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TITLE Data Collection Procedures and Descriptive Statistics for the Grade One Achievement Monitoring Tests (Baseline, S-1, S-2, and S-3), Coordinated Study No. 1. Working Paper 316. Report from the Project on Studies in Mathematics.
INSTITUTION Wisconsin Center for Education Research, Madison.
SPONS AGENCY National Inst. of Education (ED), Washington, DC.
PUB DATE Feb 82
GRANT NIE-G-81-0009
NOTE 364p.; For a related document, see TM 860 653.
PUB TYPE Reports - Research/Technical (143) -- Tests/Evaluation Instruments (160)

EDRS PRICE MF01/PC15 Plus Postage.
DESCRIPTORS Addition; Data Collection; Educational Objectives; *Elementary School Mathematics; Grade 1; Item Analysis; Longitudinal Studies; *Mathematics Skills; *Mathematics Tests; Number Concepts; Primary Education; *Problem Solving; Scores; Subtraction; Test Manuals; *Word Problems (Mathematics)

ABSTRACT

As part of a 3-year study of arithmetic problem-solving skills in young children, pretests were administered to 180 middle class first grade students. Following each of three instructional units, another achievement test was administered. The three first grade units corresponded to the Developing Mathematical Processes curriculum and involved mathematical sentence writing. The goal of the set of 10 instructional units, to be conducted over the 3-year period, was for children to develop efficient problem-solving behavior in addition and subtraction problem situations. Skills leading to this behavior were the ability to symbolize verbal problems in the form of written addition or subtraction sentences, to retrieve addition and subtraction facts, and to use addition and subtraction algorithms. Mastery of each of the instructional objectives was expected at definite times during the sequence. Matrix sampling was used to divide students into three test groups; test reliability was acceptable in all three groups and difficulty equivalent. Results indicated that students demonstrated mastery of all prerequisite instructional objectives and made satisfactory progress on the instructional topics. (Over half of this document contains sample test items, testing instructions, and item statistics.) (GDC)

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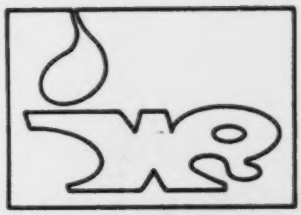

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Working Paper 316

Data Collection Procedures and Descriptive Statistics for the Grade One Achievement Monitoring Tests (Baseline, S-1, S-2, and S-3), Coordinated Study No.1

by Anne E. Buchanan
and Thomas A. Romberg

February 1982

Wisconsin Center for Education Research
an institute for the study of diversity in schooling

TM 860 623

Working Paper No. 316

DATA COLLECTION PROCEDURES AND DESCRIPTIVE STATISTICS FOR THE GRADE ONE ACHIEVEMENT MONITORING TESTS (BASELINE, S-1, S-2, AND S-3), COORDINATED STUDY NO. 1

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The research reported in this paper was funded by the Wisconsin Center for Education Research which is supported in part by a grant from the National Institute of Education (Grant No. NIE-G-81-0009). The opinions expressed in this paper do not necessarily reflect the position, policy, or endorsement of the National Institute of Education.

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TABLE OF CONTENTS

	Page
List of Tables	vii
List of Figures	vii
Abstract	ix
Introduction	1
Background Information	5
Subjects	5
Curriculum Materials and Instructional Objectives	5
Instruction	7
Achievement Monitoring Plan and Tests	9
Overview of the Three-year Plan	9
Grade 1 Objectives Assessed	12
Description of the Grade 1 Tests	13
Data Collection Procedures	21
Test Groups	21
Schedule	21
Procedure	22
Problems	24
Results	25
Scoring the Tests	25
Subtest and Item Statistics	25
Progress on the Objectives	33
Verbal Problem Types, Number Size, and Performance	47
Conclusion	51
References	53
Appendix A: Administrator's Manuals and Student Tests Forms J, K, L	55
Appendix B: Item Statistics for Forms J, K, L for the Total Population	93
Appendix C: Performance by Objective for the Three Schools and Eight Classes	191

List of Tables

Table		Page
1	Time Spent on Instruction in Sentence-writing Topics.	8
2	Objectives Assessed in Grade 1.	14
3	Outline of Multiple-choice Subtest Items.	16
4	Outline of Addition and Subtraction Facts Recall Items--Speeded Subtests	20
5	Assignment of Grade 1 Students to Test Form	22
6	Objectives Subtest Statistics for Forms J, K, and L for Four Administration Times	27
7	Addition Facts Recall--Speeded Subtest Statistics for Forms J, K, and L for Four Administration Times .	28
8	Subtraction Facts Recall--Speeded Subtest Statistics for Forms J, K, and L for Four Administration Times .	29
9	Item Statistics for the Sentence-writing 0-20, subt-join-addend (11-15) Item, Item 11M, Form J . . .	34
10	Progress Toward Objectives Across Administration Times As Represented by Proportion of Students Answering Items Correctly for Total Population. . . .	36
11	Proportion Correct by Number Size and Verbal Problem Type for Sentence-writing Items	49
12	Proportion Correct by Number Size and Verbal Problem Type for Problem-solving Items.	50

List of Figures

Figure		Page
1	Factors Influencing Pupil Performance	2
2	Overview of Achievement Monitoring Plan	10

Abstract

This paper is the first of a series of four reports that document the achievement monitoring component of a three-year study on the acquisition of addition-subtraction problem-solving skills by young children. A set of performance objectives contained in or ancillary to three grade 1 instructional units on sentence-writing for verbal problems specified text content. Tests measuring group progress toward these objectives were administered four times, once as a baseline measure and then after each unit. The scores for each objective, developed using matrix sampling procedures, indicated that performance was consistent with instruction.

Introduction

The Mathematics Work Group of the Wisconsin Center for Education Research is presently conducting a program of research focused on children's acquisition of concepts and skills related to addition and subtraction of whole numbers. A major aim of mathematical instruction is to enable students to acquire concepts and skills requisite for solving problems of many types. A goal of our current research is to understand how pedagogical and psychological factors are related to their acquisition.

The interrelationship of pupil performance on selected arithmetic skills, pupil cognitive processes, instructional materials, and teachers' classroom behaviors is depicted in Figure 1. Using this framework, we are proceeding to:

1. identify important addition and subtraction skills;
2. review past empirical data or collect new data on these skills;
3. re-examine these mathematical skills and hypothesize how they are related to underlying cognitive skills;
4. examine the instructional materials designed to teach these skills; and
5. conduct a series of empirical studies on the appropriateness of particular teacher classroom behaviors, the appropriateness of instructional materials, and the relationship of specific cognitive skills to mathematical skills.

The work of the Mathematics Work Group is built around the conceptual framework exemplified in Figure 1. The empirical and theoretical

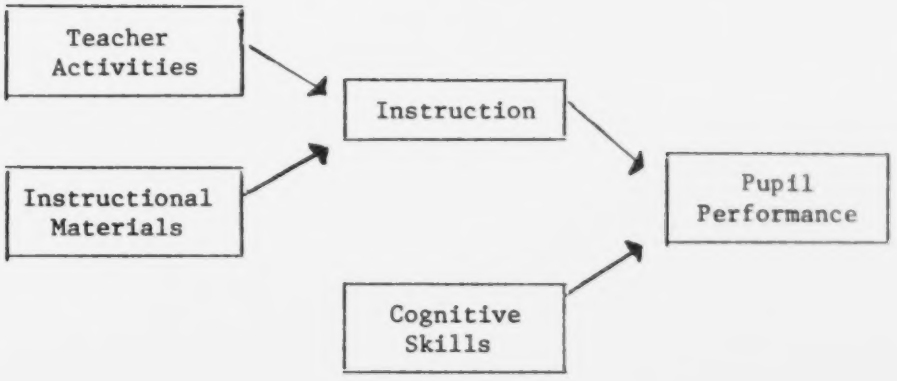

Figure 1. Factors influencing pupil performance.

investigations generally involve two or more of the factors depicted and have been organized into four major categories. These are a conceptual paper series, a set of short empirical studies, a major longitudinal study, and an invitational conference of scholars.

This paper is one of a series of summary reports from the longitudinal study. Approximately 180 students in three schools were identified as subjects for the study. One school with about 60 students chose not to continue into the second year of the study. Thus, about 120 children were followed for three school years. Pupil performance was measured in several ways:

1. Individual interviews. At several times during each school year, individual children were administered a set of problem tasks dealing with addition and subtraction. The interviewer attempted to ascertain the children's solution strategy, correctness of answer, type of errors made, and modeling procedures.
2. Group-administered paper-and-pencil tests. There were two categories of tests:
   a. Achievement monitoring. These tests measured pupil progress toward a set of performance objectives contained in the instructional materials. By means of matrix sampling procedures, estimates were made of group performance. Achievement monitoring tests were given shortly after the completion of the instructional units related to arithmetic objectives.

b. Topic inventories. These were very short tests that measured pupil progress toward mastery of the objectives of a specific instructional unit or topic. Every subject took the same test, resulting in a measure of individual performance.

Each topic inventory was given only once, providing a measure of performance on a few objectives at a single point in time; in contrast, there were repeated administrations of the same achievement monitoring test, in order to examine change in performance over time on a broad set of objectives.

Instruction and classroom environment were assessed by direct classroom observation of teacher actions, pupil behaviors, and instructional materials. A trained observer was present each day the instructional units, or topics, dealing with arithmetic objectives were used. Organizational and grouping measures were noted, along with interactions between teacher and pupils and among pupils. Measures of pupil engaged time were estimated by observing six target students.

The purpose of this paper is to report the administration of and results for the achievement monitoring tests given to grade 1 students during the first year of the study in the period December 1978 through May 1979. The tests were administered once as a baseline measure and thereafter following instruction in the three sentence-writing topics (S-1, S-2, and S-3). The paper has four major sections: background information on the subjects and instructional materials, description of the three-year achievement monitoring plan and the tests, report of the data collection procedures, and discussion of the results. Samples of the tests, administrator's manuals, and complete item and test statistics appear in the appendices.

Background Information

Subjects

The subjects were 180 first-grade students in eight classes from three elementary schools in predominantly middle class areas.

Curriculum Materials and Instructional Objectives

Each of the schools used as their mathematics curriculum the Developing Mathematical Processes (DMP) program (Romberg, Harvey, Moser, & Montgomery, 1974). Ten new instructional topics on addition-subtraction, to be integrated into the regular DMP sequence of topics, had been developed for the three-year study. The topics of interest during grade 1 were S-1, S-2, and S-3 which were sentence-writing topics; three more sentence-writing topics (S-4, S-5, and S-6) which further developed the same objectives were covered in grade 2. For the latter portion of grade 2 and first months of grade 3, four algorithm topics (A-1 through A-4) were completed. Instruction in other DMP topics was carried out as usual in all three grades, except for topics replaced by the ten special topics.

The ultimate goal of the ten topics was that children develop efficient problem-solving behavior in addition and subtraction problem situations. The specific skills believed to result in this behavior are the ability to symbolize verbal problems in the form of written addition or subtraction sentences and the ability to retrieve addition and subtraction "facts" and/or use addition-subtraction algorithms.

The content of the three grade 1 topics is summarized here:

Topic S-1. In S-1 students were introduced to the "+" and "-" symbols and learned how to symbolically represent joining and separating situations

in canonical sentences of the form a + b = ☐ or a - b = ☐. Open addition and subtraction sentences--that is, sentences apart from a story or situation--were not presented in S-1.

Topic S-2. Joining and separating situations were reviewed. Part-part-whole situations in static contexts and the comparison (difference) situation were introduced. Canonical sentences to represent these new situations were written and solved. Open sentences 0-10 were also introduced with stress on the facts 0-6.

Topic S-3. Much emphasis was placed on analyzing part-part-whole, joining, and separating situations utilizing a new tool, the part-part-whole chart, prior to writing a sentence. The comparison situation was very briefly reviewed but the part-part-whole chart was not used in conjunction with it at this time. The vertical forms for open sentences were introduced and practice on the facts 0-10 was stressed since mastery of open sentences 0-10 was expected at the end of S-3.

The skills covered in grade 1 were expressed formally in three instructional objectives common to the six sentence-writing topics:

1. Given an open problem situation involving the numbers 0-20 that is solvable by using either addition or subtraction, writes a sentence that represents the situation.
2. Given an open sentence of the form a + b = ☐ or $\underline{+\ \overset{a}{b}}$ involving the numbers 0-10 (0-20),[1] solves it.

---

[1]The basic facts beyond 10 (0-20) were emphasized in S-4 through S-6.

3. Given an open sentence of the form $a - b = \square$ or $\underset{-\ b}{a}$ involving the numbers 0-10 (0-20), solves it.

Of the many objectives included in the regular DMP topics taught in grade 1 (and Kindergarten), only those which developed the notions of numerousness and ordering for the numbers 0-20 were essential in terms of the present study, since this content was prerequisite to the three major objectives. These prerequisite objectives were:

1. Given a spoken number 0-10 or a set of 0-10 objects or events, writes the number associated with the spoken number or set of objects or events.
2. Given a spoken number 11-20 or a set of 11-20 objects or events, writes the number associated with the spoken number or set of objects or events.
3. Given two sets, orders them on the attribute of numerousness.
4. Given a set of numbers 0-20, orders them.

Instruction

Instruction the three grade 1 sentence-writing topics (S-1, S-2, and S-3) occurred in the period from January to May 1979. The topics pertaining to numerousness and ordering the numbers 0-20 had been completed before S-1. Most teachers cooperated with the request that the three S-topics be taught according to the specifications in the instructional materials. The exceptions occurred at school 2 where one teacher taught only a portion of S-2 and did not ever teach S-3. A second teacher at this school taught only selected portions of S-2 and S-3. The third teacher completed all topics.

The mathematics classes were homogeneously grouped at school 1 into three levels. In school 2 the grouping was heterogeneous except that one teacher had an open classroom with students who elected enrollment in the class; this group appeared to be of somewhat higher ability and/or achievement. The two classes in school 3 were heterogeneously grouped.

The time allocated for mathematics was:

school 1, three classes	daily classes, 30 minutes
school 2, three classes	classes four times weekly, flexible time allocations, 30 minutes average
school 3, two classes	daily classes, 40 minutes

It had been suggested that each topic be covered in two to three weeks. The actual range of time spent by the eight classes (excluding the case in which topic S-3 was not taught) appears in Table 1. Since there was much variability, interesting relationships to achievement might be demonstrated. However, no attempt to do so will be made in this report which is concerned with performance of the total population.

Table 1

Time Spent on Instruction in Sentence-writing Topics

Topic	Mimimum	Average	Maximum
S-1	277 min., 10 days	376 min., 12.4 days	472 min., 14 days
S-2	229 min., 7 days	370 min., 12.4 days	478 min., 14 days
S-3	132 min., 5 days	445 min., 15.6 days	701 min., 20 days

Achievement Monitoring Plan and Tests

Overview of the Three-Year Plan

Figure 2 presents an overview of the achievement monitoring plan for the three years of the study. All objectives on which performance was assessed are listed in abbreviated form with an indication of the points in time when instruction occurred, when mastery was expected, and when achievement was monitored. The schedule called for 11 test times: the baseline test and a test after each instructional topic.

Following the general rule that objectives should be assessed both prior to and following instruction, yet avoiding test situations which would be overly frustrating or extremely easy for the students, four overlapping test periods were identified and objectives added to or dropped from the achievement monitoring schedule accordingly. The four test periods covered the middle of grade 1 to the end of grade 1 (baseline through S-3), the middle of grade 1 to the middle of grade 2 (baseline through S-6), the beginning of grade 2 to the middle of grade 3 (S-4 through A-4), and the middle of grade 1 to the middle of grade 3 (S-1 through A-4). Achievement was assessed a minimum of four times and a maximum of eleven times per objective.

In order to limit the time any student spent in a testing situation and yet to gather a maximum amount of information about progress toward each objective, a matrix sampling plan based on earlier work in this area was followed (Romberg & Braswell, 1973). All students in each class were assigned randomly to one of three test groups. Each test group was then assigned one of three test forms for each administration

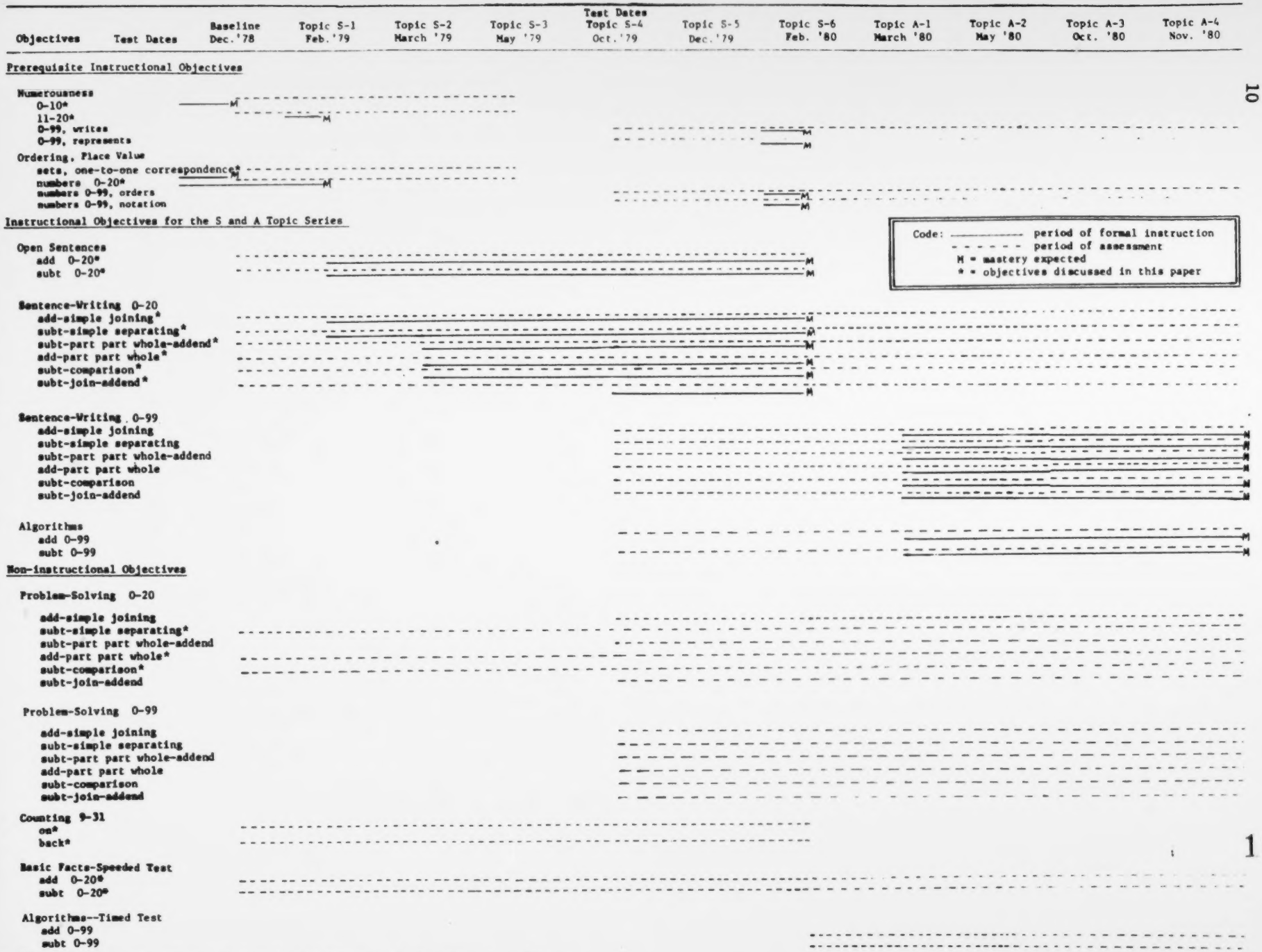

Figure 2. Overview of Achievement Monitoring Plan.

period. Each objective was represented by items on at least two and usually all three of the test forms. A description of the tests is given in the following section.

The objectives included in the achievement monitoring program were classified as (1) prerequisite instructional objectives, which were those considered necessary for achievement of the objectives of the S and A topics, (2) instructional objectives for the S and A topics, and (3) non-instructional objectives. The noninstructional objectives pertained to skills which were not formally taught in the regular DMP program or the S and A topics. However, since there was potentially a relationship between growth in these skills and progress on the formal instructional objectives, they were included in the test program. The noninstructional skills were:

1. problem-solving 0-20 and 0-99
2. counting on and counting back
3. recall of basic addition-subtraction facts under a speeded test condition
4. use of addition-subtraction algorithms under a timed test condition

The problem-solving objective was created for achievement monitoring because the instructional objectives stated for the S and A topics specified sentence-writing skills and open sentence/algorithmic skills as discrete objectives but did not actually combine in an objective the ability to integrate these skills in problem-solving situations. Assessment of problem-solving per se was also of interest because these data paralleled that gathered in the individual interview component of the study.

The objectives were also organized in terms of general mathematical content areas such as numerousness, ordering, and open sentences. (See Figure 2.) Each of these areas represented what may be thought of as a composite objective. For example, in the area of numerousness, there was an individual objective related to the numbers 0-10 and another objective for the numbers 11-20; when these two objectives were treated as one, they formed a composite objective called numerousness. The composite objectives will be used in later analyses in which aggregate data are desirable to reduce the number of variables. In the present paper, the discussion primarily concerns individual objectives.

The sentence-writing objectives were stated as composite objectives in the instructional materials; that is, there was no explicit breakdown into individual objectives for each problem type, such as joining, separating and comparison. For two reasons, the sentence-writing objectives were broken down into several discrete objectives, each reflecting a different problem situation: first, the various problem situations were introduced at different points in the sequence of sentence-writing topics; second, and more importantly, the achievement monitoring data will eventually be integrated with data from the interview component of the study which was gathered and analyzed in terms of problem type.

Grade 1 Objectives Assessed

The prerequisite instructional objectives and the instructional objectives for the S topics included in the test program for grade 1 were stated in full in the first section. The noninstructional skills for facts recall, counting, and problem-solving 0-20 were also assessed. The 19 individual

objectives assessed in grade 1 are marked with an asterisk in Figure 2 and are summarized in Table 2.

Mastery of the instructional objectives was expected at definite points during the instructional sequence. The numerousness and ordering objectives for the numbers 0-10 should have been mastered prior to base-line testing; for 11-20, mastery was anticipated prior to S-1 testing. Since only three of the six sentence-writing topics were covered in grade 1, mastery of the sentence-writing objectives was not expected in grade 1 but rather after the completion of S-6 in grade 2. Mastery of open sentences for sums or minuends to 10 was expected after S-3 while mastery of the remaining facts--open sentences for sums or minuends to 20--was hoped for after S-6. There were no specific predictions for time of mastery for the noninstructional objectives; however, it was anticipated that performance on the recall and problem-solving skills would be related to growth on the open sentence and sentence-writing objectives and that there would be improvement in counting skills due to informal work in this area both at home and at school.

Description of the Grade 1 Tests

Three forms (J, K, L) of a 25-minute paper-and-pencil test were developed for grade 1; each form had three subtests. Two separate subtests were created to assess recall of addition and subtraction facts under speeded test conditions; the major subtest contained 15 multiple-choice items covering all other objectives to be assessed in grade 1. Copies of the tests and administrator's manuals are in Appendix A; a discussion of the test development for all three years of the study appears elsewhere (Buchanan & Romberg, in press).

Table 2

Objectives Assessed in Grade 1

Numerousness
0-10
11-20
Ordering
sets, one-to-one correspondence
numbers 0-20
Open Sentences
add 0-20
subt 0-20
Sentence-writing 0-20
add-simple joining
subt-simple separating
subt-part part whole-addend
add-part part whole
subt-comparison
subt-join-addend
Problem-Solving 0-20
subt-simple separating
add-part part whole
subt-comparison
Counting
on 9-31
back 9-31
Basic Facts Recall (Speeded Tests)
add 0-20
subt 0-20

Multiple-choice subtest. An outline of the content of each form of the multiple-choice subtest appears in Table 3. Each objective in the areas of numerousness, ordering, and open sentences was represented by one multiple-choice item on every test form; i.e., three items altogether per objective. Similarly, for counting on and counting back for numbers to 18, there was one item per form; however, an additional counting item for numbers to 31 was added to each form because information on these numbers was of potential interest in the development of interview problem situations using larger numbers.

Each of the six individual objectives for sentence-writing was represented by a multiple-choice item in two of three forms; that is, two items per objective.[2] One of the items for each objective was from the 11-15 number domain. The other item was from the 5-9 domain if the objective was in Set A and from the 11-15 or 0-99 domain for Set B (see explanation of Sets A and B below). Since there was no way in a multiple-choice format to have students actually write a sentence, the items required listening to a verbal problem read aloud and then choosing the sentence which correctly represented the verbal situation. The problem situation itself was not printed on the test page. This prevented reading difficulties and also was in keeping with the procedures for the interviews in which the problems were presented orally.

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[2] The add-simple joining objective was assessed by only one item; this allowed space to include a subt-unknown subtrahend item, a situation covered in instruction though not in the interviews.

Table 3

Outline of Multiple-choice Subtest Items

Item ID[a]	Form J	Form K	Form L
1C	Numerousness 0-10	Numerousness 0-10	Numerousness 0-10
2D	Numerousness 11-20	Numerousness 11-20	Numerousness 11-20
3E	Open Sentences add 0-10	Open Sentences add 0-10	Open Sentences add 11-20
4F	Open Sentences subt 0-10	Open Sentences subt 11-20	Open Sentences subt 0-10
5G	Problem-Solving 0-20 (A) subt-simple separating 11-15	Problem-Solving 0-20 (A) subt-comparison 11-15	Problem-Solving 0-20 (A) add-part part whole 11-15
6H	Problem-Solving 0-20 (A) subt-comparison 5-9	Problem-Solving 0-20 (A) add-part part whole 5-9	Problem-Solving 0-20 (A) subt-simple separating 5-9
7I	Ordering sets, one-to-one correspondence	Ordering sets, one-to-one correspondence	Ordering sets, one-to-one correspondence
8J	Ordering numbers 0-20	Ordering numbers 0-20	Ordering numbers 0-20
9K	Sentence-Writing 0-20 (A) subt-simple separating 5-9	Sentence-Writing 0-20 (A) subt-comparison 5-9	Sentence-Writing 0-20 (A) subt-comparison 11-15
10L	Sentence-Writing 0-20 (A) add-part part whole 11-15	Sentence-Writing 0-20 (A) subt-simple separating 11-15	Sentence-Writing 0-20 (A) add-part part whole 5-9
11M	Sentence-writing 0-20 (B) subt-join-addend 11-15	Sentence-Writing 0-20 (B) add-simple joining 11-15	Sentence-Writing 0-20 (B) subt-join-addend 11-15

12N	Sentence-Writing 0-99 (B) subt-unknown subtrahend 0-99	Sentence-Writing 0-20 (B) subt-part part whole-addend 11-15	Sentence-Writing 0-99 (B) subt-part part whole-addend
130	Counting on 9-18	Counting on 9-18	Counting back 9-18
14P	Counting back 9-18	Counting back 9-18	Counting back 18-31
15Q	Counting back 18-31	Counting on 18-31	Counting on 9-18

[a]The numeric ID refers to the item data as it appears in the computer printout reproduced in Appendix B. The alpha ID refers to the actual tests; items A and B are samples. See Appendix A.

The sentence-writing objectives (or items) were further classified into two groups: Sets A and B. This was an aribitrary division created because half (Set A) of the items were designed to reflect the interview verbal problems precisely in syntax, number order, number domain, etc., while the remainder (Set B) allowed variations in these characteristics in keeping with the instructional program which presented more variations of each problem type than it was possible to cover in the individual interviews.[3] Two items in Set B were from the 0-99 domain to provide information useful in planning the interviews with larger numbers.

To avoid overloading the tests with verbal problems, only three of the six possible objectives for the problem-solving area were assessed. Each of the three objectives was represented in two of the three test forms, or two items per objective, one for numbers 5-9 and one for 11-15. All of the verbal problems were replicates of interview problems, Set A. As for the sentence-writing items, the problem situations were not printed in the student booklets.

All of the questions in the multiple choice section of the tests were read to the children and then the key phrases were repeated; in the case of the verbal problems for the sentence-writing and problem-solving objectives, the entire story situation was read twice. The children then marked an X on one of the four response choices: the solution, two

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[3]For both the sentence-writing and problem-solving objectives, Set A test verbal problems differed from interview verbal problems in that different nouns and verbs were used so that the students had a new context to consider.

distractors, and the "puzzled face," an option which indicated "I have not learned this yet." The response choices, symbols, and pictures were not read or explained to the children.

The "puzzled face" option was provided to avoid unnecessary frustration and to reduce the amount of random guessing. Although it was expected that the "puzzled face" choice would be used throughout the achievement testing because there would always be objectives not yet introduced and/or mastered, this option was particularly useful at the baseline period, since at that time children should have mastered only 2 of the 15 multiple-choice items. Marking the "puzzled face" allowed children to give a positive response indicating that they hadn't learned to find the answer to the question.

Speeded subtests. There were nine addition and nine subtraction facts on each of the three forms; the first six problems in each case covered the facts from 4 to 9; the last three involved 10 to 15 (see Table 4). This ration of easy-hard reflected the instructional emphasis from topics S-1 through S-3 which stressed facts with sums/minuends to 10 and only touched on the harder facts. Sums/minuends to 15, rather than 20, were included to reflect the number domain used in the interview tasks.

The addition and subtraction recall subtests were introduced by the test administrator; then specific directions on a tape recording preceded the nine items presented with intervals of 4 seconds' working time (except for the baseline test) for both addition and subtraction. The children wrote their answers in designated spaces, leaving spaces for unknown facts empty. There was a short break between the two subtests.

Table 4

Outline of Addition and Subtraction Facts Recall Items--Speeded Subtests

Item ID[a]	Form J	Form K	Form L
	Addition Facts Recall Subtests		
1C	1 + 5	3 + 1	2 + 4
2D	3 + 2	2 + 5	6 + 3
3E	4 + 4	1 + 6	5 + 2
4F	3 + 6	7 + 2	2 + 3
5G	4 + 3	2 + 6	5 + 0
6H	6 + 2	3 + 5	1 + 3
7I	5 + 8	4 + 8	9 + 2
8J	6 + 9	3 + 7	6 + 6
9K	9 + 3	5 + 9	4 + 7
	Subtraction Facts Recall Subtests		
1C	5 - 1	7 - 1	3 - 2
2D	9 - 2	8 - 4	6 - 4
3E	8 - 7	9 - 5	9 - 1
4F	5 - 3	7 - 4	7 - 3
5G	7 - 6	8 - 6	6 - 1
6H	8 - 5	4 - 3	7 - 5
7I	14 - 7	11 - 2	10 - 4
8J	12 - 5	13 - 8	13 - 9
9K	11 - 8	12 - 7	14 - 8

[a]The numeric ID refers to the item data as it appears in the computer printout reproduced in Appendix B. The alpha ID refers to the actual tests; items A and B are samples. See Appendix A.

For the baseline period only, the intervals were 6 seconds for addition and 7 for subtraction. Previous work in this area (Romberg, 1975) and the pilot testing in the early months of grade 1 had dictated a longer interval than 4 seconds. During the pilot testing, students did not seem to have the physical coordination and/or ability to write their answers, if any, quickly. Also, some had become extremely frustrated and upset at the pace of the facts presentation.

Data Collection Procedures

Test Groups

Following the matrix sampling plan described earlier, students in each class were randomly assigned to one of three test groups ranging in size from 11-12 students per group in school 3 to 25-26 per group in school 1. The test groups were assigned to one of the three test forms (J, K. L) according to the schedule in Table 5. Since there were four test times in grade 1, the students took one form of the test twice, at baseline and test time S-3. Because of absences and student mobility, the number of students actually tested after each topic varied somewhat. Also, because the classes moved at different paces through the topics, particularly where there was homogeneous grouping, it was not always possible to test an entire test group at one sitting.

Schedule

Baseline testing occurred in early December 1978, approximately one month before instruction in the first unit (S-1) commenced. For each topic the achievement monitoring tests were given as soon as possible

Table 5

Assignment of Grade 1 Students to Test Form

Test group	Administration Time			
	Baseline	S-1	S-2	S-3
	Test Form Assignment			
1	J	K	L	J
2	K	L	J	K
3	L	J	K	L

after each topic was completed. Since instruction in each sentence-writing topic took about three weeks and was followed by an intervening DMP topic which was not a part of the study, there were roughly six-week intervals between administrations.

Procedure

The tests were administered by Center staff members in one 25-30 minute sitting during the regular mathematics class period. The practice of having Center administrators provided uniformity in administration procedures, relieved the teachers from this responsibility, avoided later "teaching to the test," and freed the teacher to participate in interviews with other Center staff. For the baseline testing, however, the teachers were asked to remain in the

room to provide assistance as needed. Because the students were naive about paper-and-pencil tests and because the test was difficult for most students at that point, it seemed well to have the reassuring presence of the teacher in the room. Also, this informed teachers of what was happening in their absence during the following administration times.

As described previously, the 15 multiple-choice questions were read aloud while the facts recall subtests were on tape. Most children had little difficulty following the directions for either section even in the baseline period. Pacing the multiple-choice section was at the administrators' discretion, with the general policy being to move the test along by encouraging children who were pondering at length to "mark the puzzled face." Perhaps because of this option, the children did not appear to be discouraged by items that they had not met in formal instruction at the time.

The taped subtests could not be stopped once started, so there were a few children who got lost, especially in the first two administration periods; however, examination of the response spaces showed that most children kept their place well. Some children were obviously fatigued by the end of the 15-item multiple-choice subtest, even in later administration periods, but most seemed to perk up with the change of format and pace offered by the facts recall tests. Some children expressed enjoyment in doing the recall tests, but for some the pressure of a timed test was continually frustrating. The idea that the items were on tape pleased both children and teachers initially, though by the S-2 and S-3 administration times, this was no longer a novelty.

Problems

Three difficulties were encountered. First, there was some copying in every group, each time the test was administered. Certain children seemed to view this as "working together" and were quite quileless about it; others were definitely cheating.

A second problem was observed during the facts recall tests, particularly at the baseline period and again for the S-3 test time. The intervals between items--"working time"--for the baseline test proved to be too generous for some students, allowing them to count out the answers, usually with their fingers. Similarly, by S-3 the children had become facile with the mechanics of writing their answers, were familiar with the test format, and of course with the stimuli (if not the answers), so again the intervals permitted the use of counting. This may well have improved performance on one item and yet impeded performance on the next, since some children ran out of time as they counted out an answer. No doubt the responses for these recall tests represented a mixture of facts actually committed to memory and "facts" determined as the test was administered.

Perhaps the major problem, in terms of its possible effect on general test performance, was the somewhat unfavorable attitude on the part of the teachers in school 2 with respect to the study in general and to the achievement testing in particular. Although this problem was not thoroughy documented, on at least three different occasions, members of the school staff made loud and negative comments on the testing in the presence of the students as well as in front of Center staff. Also, it did not appear that the teachers made any effort to motive the children to "try hard,"

or "do their best," or in other ways assist in providing a positive testing atmosphere.

Results

Scoring the Tests

Subtest statistics and item parameters for each form were computed for the multiple-choice subtest, the addition facts recall subtest, and the subtraction facts recall subtest at each administration time using the LERTAP program (Nelson, 1974). Scores representing progress on the objectives were then created for each administration by combining in a single score across forms the proportion correct for all individual items related to that objective; similarly, scores for the composite objectives incorporated the scores for all objectives related to the same content area. Thus, rather than item difficulties, or p values, what might be called "objective difficulties" were calculated to represent group progress toward mastery of the objectives. Since under the matrix sampling plan most objectives were represented by items on at least two and usually all three forms, the "objective difficulties" at any one test time were less affected by possible bias in the random assignment of students to test group than the item and subtest statistics.

Subtest and Item Statistics

Although the results by objective are of primary interest in the study, a brief report of the subtest and item results is offered first as background. The multiple-choice subtest was not developed as a standard

norm-referenced measure but rather as a criterion-referenced test with each item on any one form assessing mastery of a specific objective. Therefore, the total score on the subtest is an aggregate measure of performance on several objectives. Also, rather than the usual expectation that about half of the students would respond correctly to each item, it was expected that almost none, some, or almost all of the students might answer correctly depending on the status of instruction at the time of the test. Another factor affecting the subtest and item data for the multiple-choice subtest was guessing. The "puzzled face" or "I haven't learned this yet" option was offered to prevent random guessing but guessing still occurred. Other factors affecting the item and subtest analyses for both the multiple-choice and recall subtests were the relatively short test length and small population of students tested.

Tables 6-8 report the subtest statistics for all forms and administration periods for the total population. Information included is the number of individuals tested, number of items, mean, standard deviation, highest and lowest score, Hoyt estimate of reliability, and the standard error of measurement.

The means and standard deviations indicate that the three forms were about equivalent in difficulty within each of the four administration periods. The reliabilities for the multiple-choice subtest ranged from .53 to .73 which is satisfactory for tests of this type. For the addition and subtraction recall subtests, the respective reliabilities ranged from .67 to .90 and .63 to .84. The recall subtests, although

Table 6

Objectives Subtest Statistics

for Forms J, K, and L for Four Administration Times

Administration Time	Form	Number of Individuals	Number of Items	Mean	S.D.	Highest Score	Lowest Score	Hoyt Est. r	S.E.M
	J	56	15	7.26	2.55	13	2	.65	1.45
Baseline	K	57	15	7.79	2.19	13	3	.55	1.43
	L	57	15	7.54	2.30	12	2	.58	1.43
	J	55	15	9.84	2.19	14	5	.53	1.45
S1	K	58	15	8.79	2.63	14	2	.73	1.31
	L	55	15	8.67	2.58	13	1	.72	1.32
	J	54	15	10.96	2.21	14	5	.63	1.30
S2	K	58	15	10.90	2.25	15	6	.62	1.33
	L	60	15	9.57	2.21	13	5	.59	1.37
	J	60	15	10.63	2.18	15	3	.62	1.30
S3	K	55	15	11.80	2.19	15	8	.63	1.29
	L	60	15	10.68	2.14	15	5	.58	1.33

33

Table 7

Addition Facts Recall--Speeded Subtest Statistics

for Forms J, K, and L for Four Administration Times

Administration Time	Form	Number of Individuals	Number of Items	Mean	S.D.	Highest Score	Lowest Score	Hoyt Est. r	S.E.M.
Baseline	J	57	9	4.16	2.84	9	0	.86	.99
	K	57	9	4.67	3.0	9	0	.87	1.00
	L	57	9	4.86	3.17	9	0	.89	.99
S1	J	55	9	4.42	2.72	9	0	.84	1.01
	K	58	9	5.03	3.15	9	0	.90	.96
	L	55	9	5.75	3.0	9	0	.88	.98
S2	J	54	9	6.06	2.57	9	0	.85	.95
	K	58	9	6.29	2.26	9	0	.80	.96
	L	60	9	6.25	2.65	9	0	.84	1.00
S3	J	60	9	6.17	2.19	9	1	.79	.94
	K	55	9	7.04	2.28	9	0	.83	.88
	L	60	9	7.63	1.62	9	2	.67	.87

Table 8

Subtraction Facts Recall--Speeded Subtest Statistics

for Forms J, K, and L for Four Administration Times

Administration Time	Form	Number of Individuals	Number of Items	Mean	S.D.	Highest Score	Lowest Score	Hoyt Est. r	S.E.M.
Baseline	J	57	9	2.89	2.18	7	0	.78	.97
	K	57	9	3.12	2.41	8	0	.81	1.00
	L	57	9	2.75	2.25	9	0	.78	.99
S1	J	55	9	4.09	2.30	9	0	.80	.97
	K	58	9	3.60	2.14	8	0	.72	1.08
	L	55	9	4.27	2.50	9	0	.82	1.01
S2	J	54	9	4.98	2.26	9	0	.77	1.01
	K	58	9	4.97	2.09	9	1	.72	1.04
	L	60	9	4.77	2.12	8	0	.75	.99
S3	J	60	9	5.32	2.14	9	0	.75	1.00
	K	55	9	5.93	2.57	9	0	.84	.98
	L	60	9	6.25	1.56	9	2	.63	.90

short, contained only one type of item so that somewhat higher reliabilities would naturally be expected.

Item statistics for all forms and administration periods appear in Appendix B. The tables include the number and percentage of students selecting each response (the p-value or item difficulty), the point-biserial and biserial correlations with the subtest and the total test, and the average subtest and total test scores for individuals selecting the correct response.

In general the item difficulties reflected the instructional sequence for the prerequisite and S topic objectives. For example, for the prerequisite objective for numerousness 11-20, item 2D in Form J had p-values for the four test times of 96.5%, 100.0%, 100.0%, and 98.3% indicating initial mastery and subsequent maintenance by virtually every student. The p-values for most of the items associated with prerequisite objectives followed this pattern, though p-values for some items were slightly lower at baseline and S-1 test times in the 80-90% range.

An illustrative item for the regular instructional objectives of the S topics assessed sentence-writing 0-20, subt-simple separating, with numbers in the 11-15 domain. This item (item 10L in Form K) had a p-value of 15.8% at baseline. After the objective was introduced in S-1, the p-value was 63.8%, and at S-2 and S-3 in which further instruction was carried out, 75.9% and 89.1% respectively. The p-values for most of the sentence-writing and open sentence items can be related to instruction in this fashion, although there are exceptions. For example, for one of the items assessing open sentences, add 0-20, the p-value at baseline

was relatively high, 47.4%. This item (item 3E in Form K) required the student to choose the correct solution for the open sentence 5 + 0 = □. Apparently, many students knew something about the meaning of zero in an addition context prior to formal instruction on open sentences.

The items for the noninstructional objectives for problem-solving had p-values at baseline which were notably higher than those for items assessing the corresponding sentence-writing objectives. Thereafter, performance in these two areas was more comparable and can be related in part to instruction in sentence-writing; for example, the parallel item to item 10L in Form K which was discussed above is item 5G in Form J which assessed problem-solving 0-20, subt-simple separating with numbers in the 11-15 domain. The p-values were 47.4% at baseline, in contrast to 15.8% for the sentence-writing item, and after that 72.7%, 66.7%, and 78.3% (compared to 63.8%, 75.9%, 89.1%). For the other noninstructional area included in the multiple-choice subtest--counting--the p-values were generally somewhat unstable and showed little overall growth; item 14P in Form K, for example, had consecutive values of 29.8%, 13.8%, 36.2%, and 40.0%.

P-values for the individual items (basic facts) in the two recall tests varied greatly within test time according to number size. For example, in Form J at baseline, the items for the "easy" facts 3 + 2 and 4 + 4 had p-values of 63.2% and 70.2% respectively while the "hard" facts/items 3 + 6 and 5 + 8 had p-values of 35.1% and 14.0%. Item difficulties increased steadily over the test times for most items while the relative difficulties within test time remained constant. There was some effect of item position on p-values in the recall subtests but

this has not been systematically examined since the items were randomly ordered and the aggregate scores for all items associated with the objective are of primary interest in the study.

The biserial correlations for most items were adequate or better ($\geq .30$) for the correct response and negative ($\leq .20$) for incorrect responses. The "puzzled face" option was used appropriately as indicated by the biserials for this response choice, which were almost always strongly negative. That is, children who chose this response for particular items also had low scores on the total subtest.

The irregular biserial correlations can sometimes be related to the criterion-referenced nature of the subtest items, especially for the prerequisite and S topic instructional objectives. When an item was extremely easy because the objective should have been mastered by most students, low positive or negative biserial correlations for the correct response could occur depending on subtest scores for the few students <u>not</u> selecting the correct choice. For example, for Form K item 8J (ordering numbers 0-20) in the last administration period (S-3), the biserial correlation for the correct response was -.28 while for the only distractor selected, it was .41. This was the case because the single child who missed the item, probably due to carelessness, had a total subtest score of 14 while the mean for the 54 children selecting the correct response was 11.76.

Similar irregular biserials occurred for very difficult items on which mastery was not expected, for instance when a few poorer students guessed the correct response while the better students appropriately

described themselves by choosing the puzzled face. For some items the appropriate use of the "puzzled face" option with consequent "good" biserials probably weakened the other distractors, causing them to have inadequate biserials. The items for the problem-solving and counting objectives had satisfactory biserial correlations without exception as did the facts recall items, perhaps because performance on these items was less closely related to the instructional program.

Interesting biserial correlations in terms of the study as a whole occurred for items assessing the sentence-writing objectives for the two addend and the comparison situations. Item data for a striking example (item 11M, Form J) is presented in Table 9. The distractor containing the reverse operation (plus sign) was very attractive at all test times, even to students who did quite well on the subtest as a whole. All of the items for these three subtraction situations included one or two distractors which were addition sentences, most of which were powerful distractors, although this varied from test time to test time according to problem type. The power of these distractors may be related to the tendency shown in the individual interviews to use addition strategies such as counting up from a given number or adding on with manipulatives in solving some subtraction verbal problems (Kouba, Moser, Buchanan, Carpenter, & Cookson, 1980; Kouba & Moser, 1980a, b).

Progress on the Objectives

In this section the results of aggregating the item data to create scores representing progress on each objective will be discussed. The objective data ("objective difficulty") for each administration time

Table 9

Item Statistics for the Sentence-writing 0-20, subt-join-addend (11-15) Item, Item 11M, Form J[a]

Test Time	Response Choice	Proportion	Biserial Correlation	Total Subtest Score
Baseline N = 57	(1) 8 - 6 = ☐ (includes solution)	3.5	-.23	6.00
	(2) 14 + 8 = ☐ (reverse operation)	36.8	.47	8.48
	(3) 14 - 8 = ☐ (correct response)	14.0	.06	7.50
	(4) puzzled face	45.6	-.44	6.31
S-1 N = 55	(1)	7.3	-.02	9.75
	(2)	49.1	.34	10.44
	(3)	9.1	.35	11.20
	(4)	34.5	-.52	8.63
S-2 N = 60	(1)	1.9	.38	13.00
	(2)	66.7	.24	11.25
	(3)	5.6	-.52	8.67
	(4)	25.9	-.14	10.57
S-3 N = 60	(1)	10.0	-.04	10.50
	(2)	61.7	.15	10.84
	(3)	11.7	.26	11.57
	(4)	15.0	-.49	9.00
	(5) (blank)	1.7	.25	12.00

[a]The item read: This number story is about a plant. Mark the number sentence that tells how to find the answer. A plant was 8 cubes tall. It grew some. Now it is 14 cubes tall. How much did it grow?

will be related to the instructional program the students experienced. The proportion correct for each individual objective and for the composite objectives for the total population at all administration times is reported in Table 10; results for each school and class appear in Appendix C. As noted previously, only the data for individual objectives are of interest here--data for the composite objectives were prepared for subsequent analyses.

Numerousness, Ordering. Three of the four objectives for numerousness and order had been mastered[4] by the great majority of students at the baseline test time. The proportion correct was above 90%, which for numerousness 0-10 and ordering sets was expected since instruction on these objectives had been completed prior to the study. Final instruction on the objectives for numerousness 0-20 and ordering numbers 0-20 occurred in the topic taught between the baseline and S-1 test times, but for the numerousness objective, this work apparently was more more in the nature of reinforcement. At the S-1 administration time, the score for ordering numbers 0-20 increased as expected to 93.7% from the 78.4% at baseline. Mastery of these four objectives was prerequisite to the S topics series, so the preceding results were desirable. Mastery status was maintained throughout grade 1.

Open Sentences. Instruction for the addition open sentence objective was given in S-1, S-2, and S-3. In the S-1 the sentences were introduced only in conjunction with verbal problems rather than in "naked" form. However, since the proportion correct jumped from 34.5% at baseline to

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[4] A proportion correct $\geq$ 90% is the criterion for mastery. While it is recognized that not every student will have mastered the objective using this criterion, it allows for measurement error and assures that most students have reached mastery.

Table 10

Progress Toward Objectives Across Administration Times As Represented by Proportion of Students Answering Items Correctly for Total Population

Description of Objectives	Results for Objectives					Results for Composite Objectives				
	Number of Items	Base-line	S-1	S-2	S-3	Number of Items	Base-line	S-1	S-2	S-3
Numerousness										
0-10	3	97.1	96.4	98.8	99.4					
11-20	3	93.0	91.1	95.9	97.7	6	95.0	93.8	97.4	98.6
Ordering										
sets, one-to-one correspondence	3	90.6	95.8	95.4	95.4					
numbers 0-20	3	78.4	91.7	94.2	93.7	6	84.5	93.8	94.8	94.6
Open Sentences										
add 0-20	3	34.5	60.7	79.1	80.0					
subt 0-20	3	19.3	41.7	68.0	76.0					
± 0-10	4	29.4	57.9	79.8	78.7					
± 11-20	2	21.9	38.1	61.9	76.5	6	26.9	51.2	73.6	78.0
Sentence-Writing 0-20 (Set A)										
subt-simple separating	2	21.1	72.6	84.8	88.7					
add-part part whole	2	34.2	70.0	82.5	89.2					
subt-comparison	2	16.7	11.5	39.0	46.1					
5-9	3	28.1	55.4	72.7	76.0					
11-15	3	19.0	47.0	64.0	73.7	6	24.0	51.2	68.3	74.9
Sentence-Writing 0-20 (Set B)										
subt-join-addend	2	11.4	5.4	6.1	15.0					
subt-part part whole-addend	2	16.7	20.4	32.2	44.4					
add-simple joining	1	45.6	75.9	91.4	87.3					
subt-unknown subtrahend	1	17.5	60.0	66.7	73.3					
11-15	4	21.9	28.3	35.7	43.0					
0-99	2	15.8	38.2	45.6	51.7	6	19.9	31.5	39.0	46.0
Sets A and B						12	21.9	41.4	53.6	60.4

(continued)

Problem Solving 0-20 (Set A)										
subt-simple separating	2	68.4	80.9	82.5	87.5					
add-part part whole	2	77.2	89.4	89.8	91.3					
subt-comparison	2	42.1	39.8	55.4	64.4					
5-9	3	74.8	78.6	86.6	85.1					
11-15	3	50.3	61.3	65.7	77.1	6	62.6	69.9	76.2	81.1
Counting (Set A)										
on 9-18	3	55.0	56.6	64.0	69.7					
back 9-18	3	35.1	31.5	42.4	40.6	6	45.0	44.1	53.2	55.1
Counting (Set B)										
on 18-31	2	43.0	41.6	40.7	52.2					
back 18-31	1	26.3	32.7	40.7	31.7	3	37.4	38.7	40.7	45.1
Counting On 9-31	5	50.2	50.3	54.5	62.7					
Counting Back 9-31	4	32.9	31.8	42.0	38.3	9	42.5	42.3	49.0	51.8
Recall of Basic Facts (Speeded Test)										
add 0-20						27	50.7	56.3	68.9	77.1
subt 0-20						27	32.5	44.3	54.5	64.8

Number of Subjects[a]

		Base-line	S-1	S-2	S-3
Form J	N =	57	55	54	60
Form K	N =	57	58	58	55
Form L	N =	57	55	60	60

[a]For those objectives for which there are three items, the number of subjects represented in the proportion correct at a particular test time is ascertained simply by summing the N's for the three forms; however, when there are more or less than three items, the N is increased or decreased by 54-60 subjects per item.

60.7% at the S-1 test time, students were apparently able to apply their knowledge of sentences associated with verbal problems to open sentences in isolation. Further progress was evident at S-2 (79.1%) but then a plateau was reached at S-3 (80.0%). This was primarily due to the difficulty of the single item expressed in non-canonical form ($2 + \square = 7$) for which a p-value of only 55.0% was attained by S-3. (The non-canonical form was not introduced until S-4.) One might have expected that the single item with larger numbers ($5 + 8 = \square$) would also have been difficult, since only the facts with sums/minuends ≤ 10 were emphasized in grade 1, but at S-3 the proportion correct was 86.7%. Perhaps some children counted on to determine the answer.

The subtraction open sentence objective was also covered in S-1, S-2, and S-3. Progress on this objective was steady across the test times; as for addition, large improvement occurred between the baseline and S-1 test times (19.3% to 41.7%), no doubt due to the introduction in S-1 of sentences associated with verbal problems. At the S-2 test time, there was another increase (to 68.0%) probably due to the instructional emphasis on open sentences. Growth began to level off at S-3 with 76.0% correct. There was no non-canonical sentence item for subtraction as there was for addition; the source of the lower score in this case was the single item containing larger numbers ($14 - 8 = \square$) which at S-3 had a p-value of 65.5%. This was to be expected since mastery of the facts above 10 was not required until S-6, though many students could answer the corresponding addition item correctly.

Although the subtraction sentences were somewhat more difficult than the addition sentences at baseline, S-1, and S-2, by S-3 the difficulty

for the two types was about equivalent. By S-3 mastery of canonical open sentences for the numbers 0-10 was expected; since the overall proportion correct at S-3 test time for the four 0-10 items was 78.7% (including the one non-canonical item), progress on these objectives was satisfactory.

Sentence-writing. As discussed previously, the sentence-writing objective for the S topics was not stated in terms of particular verbal problem types in the instructional materials, but for purposes of achievement monitoring each type was treated as an individual instructional objective. Mastery of sentence-writing for numbers 0-20 was not expected until the end of the S topic series. No predictions of mastery at particular points in the series were established for the different verbal problem types; however, since the various situations were introduced and emphasized in particular topics, it is possible to relate performance to instruction.

The sentence-writing data in Table 10 are presented in the two sets described earlier, Sets A and B, according to whether or not item characteristics such as syntax corresponded to interview tasks. This distinction may be useful in future analyses relating interview and achievement monitoring data. In the present discussion, only the disparity in number sizes for the two sets should be noted. Because Set A contains objectives assessed by items with number sizes 5-9 and 11-15 while Set B includes objectives with items in the 11-15 and/or 0-99 domain, scores representing performance on the latter objectives may be somewhat deflated both relative to Set A and to the sentence-

writing objective per se which only includes numbers to 20. Since the 11-15 domain is common to all six objectives of major interest, it may be advisable in future analysis to use only these items. In a later section, the relationship between number domain and performance on both the sentence-writing and problem-solving objectives will be discussed.

The proportion correct at baseline for both the simple joining and the add-part part whole objectives (45.6% and 34.2% respectively) indicates that many children had at least some familiarity with the plus sign and/or addition sentences prior to instruction. Performance on the four subtraction objectives was roughly equivalent (between 11.4% and 21.1%) at this point and suggests less familiarity with the minus sign and/or subtraction sentences. Immediately after instruction in S-1 in which canonical sentences for simple joining and simple separating problems were introduced, performance on these two objectives increased impressively (from 45.6% to 75.9% for joining and from 21.1% to 72.6% for separating); also though the add-part part whole situation was not covered in S-1, performance jumped to 70.0% at S-1, apparently as a byproduct of the work on joining. There was nominal improvement on the subt-part part whole-addend objective, and a similarly inconsequential drop in performance for the subt-join-addend and comparison objectives. The results for the two addend and comparison objectives are consistent with instruction; that is, these situations were not covered in S-1.

In S-2 simple part-part-whole (both addition and subtraction) and comparison problem situations were introduced and simple joining and

separating were reviewed. Modest progress was evident at the S-2 test time for the subt-part part whole-addend objective (from 20.4% at S-1 to 32.2% at S-2) and more substantial progress (11.5% to 39.0%) for the comparison objective. Mastery (91.4%) was reached for joining and approached for the simple separating and add-part part whole objectives (84.8%, 82.5%), at least in terms of a multiple-choice context in which the sentence is selected rather than generated. No improvement was shown for the subt-join-addend objective which was the only situation not introduced in instruction in S-2.

All of the verbal problem types introduced previously except the comparison situation were analyzed in S-3 using a part-part-whole chart. Use of this instructional tool apparently had a beneficial effect on performance on the subt-part part whole-addend objective for which scores changed from 32.2% at S-2 to 44.4% at S-3. If the p-values are examined, it is evident that most of this improvement was due to the item for the numbers 11-15 (37.9% to 60.0%) and very little to the 0-99 item (26.7% to 30.0%). In this case performance on the objective for numbers 0-20 probably ought to be based on the 11-15 item data rather than on the aggregate score. Though not included in S-3 instruction, there appeared to be some growth on the subt-join-addend objective (from 6.1% at S-2 to 15.0% at S-3), possibly as a derivative of work with the part-part-whole chart. However, since the results at baseline were 11.4%, nominal overall progress was actually demonstrated.

There was less room for improvement on the add-part part whole objective at S-3 but scores did increase from 82.5% to 89.2%. Three

situations were less amenable to use with the part-part-whole chart. There was slight improvement for the comparison (which was not reviewed) and simple separating objectives and slight loss for simple joining; the loss may be due simply to carelessness since the S-2 proportion correct was 91.4%.

The growth pattern across the four test periods for the extra objective--subt-unknown subtrahend--was similar to that for the two addition and the simple separating objectives; i.e., a dramatic increase from 17.5% to 60.0% after S-1 and then continued modest growth to 73.3% at S-3. Since the single item for this objective contained numbers 0-99 and this verbal situation did not receive a great deal of emphasis in instruction, the high level of performance is impressive and probably reflects work on the standard simple separating situation.

The distractors offered for the sentence-writing items were restricted to (a) a canonical sentence containing the reverse operation sign and the two given numbers in appropriate order and (b) a canonical sentence containing either operation with the solution and one of the given numbers, or, containing either operation and a repeated given number. The only exception was a distractor for one item which had no operation sign and combined the given numbers (7,5), i.e.; 75 = □. As noted previously in the discussion of biserial correlations, there was a strong tendency even among better students toward selecting the response choice or choices containing the addition sign (reverse operation) for the three non-separating situations. The effect held even after instruction on the comparison and subt-part part whole-addend situations. The selection

of an addition sentence to represent the comparison and subt-join-addend problem situations, though an incorrect response here, may be related to the successful strategies exhibited in the grade 1 individual interviews in which students solved these tasks in an additive manner (Kouba et al., 1980; Kouba & Moser, 1980a, b) though the parallel does not appear to hold for the subt-part part whole-addend situation. These and other relationships between the achievement monitoring and interview data will be examined further in future analyses.

In summary, for the sentence-writing area progress on each objective seemed consistent with instruction and progress toward the overall sentence-writing objective, to be mastered at S-6, was satisfactory.

Problem-solving. The problem solving items required the child to select the correct answer for the verbal situation; the set of problems corresponded to the Set A sentence-writing problems. There were no Set B problems due to limitations on test length.

Performance on the problem-solving objectives for the simple separating and add-part part whole situations was quite high, 68.4% and 77.2% respectively, at the baseline test period. For the subt-comparison situation, the proportion correct was 42.1% at baseline. Performance on separating and add-part part whole problem-solving improved noticeably after instruction in S-1, modestly after S-2, and at S-3 scores were about mastery level, respectively, 87.5% and 91.3%. There was no instruction in S-1 for the comparison situation, and there was no improvement. Comparison sentences were stressed in S-2, reflected in the gain from 39.8% to 55.4%. After S-3, in which there was a very brief review, there was further modest gain, to 64.4%.

The distractors for the problem-solving items were (a) the number resulting from a reverse operation, and (b) either a given number or a miscount just one number off from the correct response. There was a strong preference for the given number for the comparison items; only one of the two items offered the solution generated by using the reverse operation as a distractor and it was rarely selected, in contrast to what might have been indicated from the results for the sentence-writing items. Apparently, choosing the given number was more attractive than performing the reverse operation. Since the add-part part whole and separating items were very easy, the distractors were of little interest.

Although the overall improvement on the three problem-solving objectives paralleled progress on the sentence-writing objectives and can be related to instruction, it is noteworthy that at baseline many students could already solve problems for these three situations, at least given a multiple-choice context, and that their baseline problem-solving scores were distinctly better than the parallel sentence-writing scores. Baseline success in problem-solving is of particular interest to the study because the individual interviews showed similar results (Kouba et al., 1980).

Counting. The lack of substantial growth for the counting on and counting back objectives is quite striking; performance on the numbers 9-18 (Set A) was better than for numbers 18-31 (Set B) for counting on at all test points, while for counting back this difference was less noticeable and occurred only at baseline and S-3. When Set A and Set B

were combined, for counting on the proportion correct at baseline was 50.2% and at S-3, 62.7%; there was even less gain on counting back, from 32.9% to 38.3%.

There was no formal instruction in counting and yet one might expect that informal work, both at school and at home, or exposure to other mathematical experiences would promote growth. It may be that the items were inadequate to measure any growth; yet they did yield satisfactory item statistics indicating that performance on them was at least consistent with overall performance on the test. The two distractors for every item were miscounts--either one or two away from the correct response in the same direction, or one away in both directions. The items themselves were of distinctly different types. Interestingly enough, no matter which item or which distractors are examined, there was little difference in performance. That is, the p-values were quite similar, and the two distractors were chosen equally often. One hypothesis is that the students who got the item wrong could not keep track of their counting accurately, so that their wrong answers were more or less a guess; this might explain why the distractors were chosen equally often--it was simply random.

Recall of Addition and Subtraction Facts (Speeded Test). Increasing the speed with which students can respond to open sentences (basic facts) was not a formally stated objective of instruction for the S topics. However, in the course of instruction there were some worksheets used which were timed and the teachers employed to varying degrees standard techniques such as flash card drills. These factors plus practice on

the facts both in open sentence and verbal problem context throughout the three Grade 1 topics could be expected to produce improved facility in recall.

At the baseline period, no students were presumed to have memorized any facts but given the 6 and 7 seconds working time, respectively, for addition and subtraction some students were able to figure out responses by quickly counting with their fingers or by means of some mental tactic. As discussed previously, the test administrators who had observed the finger counting at baseline decided that recall was not being measured in many cases and the working time for both addition and subtraction was reduced to 4 seconds for the subsequent test times. The shorter time intervals seemed somewhat more appropriate in that at S-1 and to a lesser extent S-2 there was much less obvious counting. However, by S-3 the new interval had also become generous.

Certain children were extraordinary in their ability to listen to the problem, lay down their pencil, count out the answer, pick up their pencil, and write the response within the time allowed. On the other hand, some children who appeared to mentally determine an answer fairly quickly could barely perform the mechanics of writing the response within the time allotment, particularly in the earlier test times. Some children seemed to be able to keep working on the previous problem(s) while at the same time attending to the immediate problem; for all four test times there was an additional period of 3 or 4 seconds expended in pronouncing each problem, e.g., "Box F, 7 + 2."

With the preceding background in mind, the results may be considered. The baseline score for addition was 50.7% and for subtraction, 32.5%.

Between baseline and S-1 there was somewhat less improvement for addition than subtraction (to 56.3% and 44.3%, respectively), probably because the baseline time intervals gave children who could count on quickly an advantage. Thereafter there was steady growth of about ten percentage points at each test time reaching 77.1% correct for addition and 64.8% for subtraction at S-3. These results were consistent with instruction and also with progress on the open sentence objectives, for which at S-3 there was 80.0% correct for addition open sentences and 76.0% for subtraction.

Verbal Problem Types, Number Size, and Performance

The scores discussed above for Set A sentence-writing and problem-solving objectives were derived from two items, one from each of the 5-9 and 11-15 number domains. Data for the Set B objectives (sentence-writing only) were based on one or two items from 11-15 and/or 0-99 domains. Because the data were not parallel, comparisons in performance among the verbal problem types (objectives) were not made in the previous section except in a very general sense. Also, the effect of number size within problem type was not discussed in any detail. Since verbal problem performance is of particular interest in the study, the data by problem type and number size for the sentence-writing and problem-solving objectives are presented here in Tables 11 and 12.

Using the proportion correct for the 11-15 domain, it is possible to compare performance on all verbal problems except the subtrahend problem. The order of difficulty for both sentence-writing and problem-solving was constant across all test times with minor exceptions. The two addition problems were consistently easier than the four subtraction problems

Table 11

Proportion Correct by Number Size and Verbal Problem Type for Sentence-writing Items

Set	Verbal Problem Type	Administration Time											
		Baseline			S-1			S-2			S-3		
		5-9	11-15	0-99	5-9	11-15	0-99	5-9	11-15	0-99	5-9	11-15	0-99
B	add-simple joining	--	45.6	--	--	75.9	--	--	91.4	--	--	87.3	--
A	add-part part whole	38.6	29.8	--	72.7	67.3	--	78.3	87.0	--	88.3	90.0	--
A	subt-simple separating	26.3	15.8	--	81.8	63.8	--	94.4	75.9	--	88.3	89.1	--
B	subt-part part whole-addend	--	19.3	14.0	--	24.1	16.4	--	37.9	26.7	--	60.0	30.0
A	subt-comparison	19.3	14.0	--	13.8	9.1	--	46.6	31.7	--	49.1	43.3	--
B	subt-join-addend[a]	--	14.0/8.8	--	--	9.1/1.8	--	--	5.6/6.7	--	--	11.7/18.3	--
B	subt-unknown subtrahend	--	--	17.5	--	--	60.0	--	--	66.7	--	--	73.3

[a]There are two items (11-15) for the subt-join-addend situation.

Table 12

Proportion Correct by Number Size and Verbal Problem Type for Problem-solving Items

Set	Verbal Problem Type	Administration Time							
		Baseline		S-1		S-2		S-3	
		5-9	11-15	5-9	11-15	5-9	11-15	5-9	11-15
A	add-part part whole	86.0	68.4	94.8	83.6	100.0	80.0	98.2	85.0
A	subt-simple separating	89.5	47.1	89.1	72.7	96.7	66.7	96.7	78.3
A	subt-comparison	49.1	35.1	50.9	29.3	61.1	50.0	61.7	67.3

except at S-3 when the subt-simple separating problem was equivalent in difficulty to the addition problems for sentence-writing. The add-joining problem was clearly easier than the add-part part whole problem at baseline and S-1, but thereafter the scores were quite similar. After the baseline test when the four subtraction problems were about the same in difficulty for sentence-writing, and the subt-separating problem was somewhat easier than the subt-comparison problem for problem-solving, a definite pattern was evident. The subt-simple separating problem was the least difficult followed by the subt-part part whole-addend, subt-comparison, and subt-join-addend problems (for the latter two problem types the distinction at S-1 for sentence-writing is less clear). It is unfortunate that no data exist for the two addend problems in the problem-solving format since, given the negative effect on performance of the distractors containing the reverse operation for the subt-join-addend sentence-writing objective, in particular, there might have been a contrasting order of difficulty among the subtraction problems.

The effect of number size on performance can be observed in Tables 11 and 12. As might be expected, the verbal problems containing numbers 5-9 tended to be easier than those with numbers 11-15 for both the sentence-writing and problem-solving objectives with certain exceptions. For the only objective which included both 11-15 and 0-99 items, the subt-part part whole-addend objective, the 0-99 problem was harder especially at S-3. Since performance on the subt-unknown subtrahend problem with numbers 0-99 was roughly parallel to that on the simple separating problem with numbers 11-15, we might assume that students would also have done fairly well on the subtrahend problem given with smaller numbers.

Conclusion

At the end of grade 1 in which three of the six sentence-writing instructional topics developed for the study were completed, students demonstrated mastery of all prerequisite instructional objectives and made satisfactory progress on the instructional objectives of the topics. For both addition and subtraction open sentences, scores approached mastery as did scores for sentence-writing in addition situations. Performance on sentence-writing for subtraction situations varied according to problem type; only the simple separating objective was nearly mastered. Except for counting, growth on the noninstructional objective was consistent with that on the instructional objectives.

References

Buchanan, A. E., & Romberg, T. A. Instrumentation for the achievement monitoring component of coordinated study #1 (Working Paper). Madison: Wisconsin Center for Education Research, in press.

Kouba, V. L., & Moser, J. M. Results from second individual interview (January 1979), coordinated study #1 (Working Paper No. 285). Madison: Wisconsin Center for Education Research, 1980. (a)

Kouba, V. L., & Moser, J. M. Results from third individual interview (May 1979), coordinated study #1 (Working Paper No. 289). Madison: Wisconsin Center for Education Research, 1980. (b)

Kouba, V. L., & Moser, J. M., Buchanan, A. E., Carpenter, T. P., & Cookson, C. J. Results from first individual interview (October 1978), coordinated study #1 (Working Paper No. 281). Madison: Wisconsin Center for Education Research, 1980.

Nelson, L. R. LERTAP. University of Otago, Duneden, New Zealand, 1974.

Romberg, T. A. Four studies on aspects of assessing computational performance (Technical Report No. 297). Madison: Wisconsin Center for Education Research, 1975.

Romberg, T. A., & Braswell, J. Achievement monitoring via item sampling: A practical data gathering procedure for formative evaluation. Journal for Research in Mathematics Education, 1973, 4, 267-270.

Romberg, T. A., Harvey, J. G., Moser, J. M., & Montgomery, M. E. Developing mathematical processes. Chicago: Rand McNally & Co., 1974.

Appendix A

ADMINISTRATOR'S MANUALS AND STUDENT TESTS

FORMS J, K, L

J

Directions for Administering Achievement Monitoring Test J

56

Coordinated Study #1

General Directions

Reading the Test. This test is read aloud to the children. Read the questions exactly as they are printed in the directions; do not paraphrase. Each question is read twice--or the key phrases are repeated after the original question is read. Read the questions at a somewhat slower than conversational pace. The second part of the test, the basic facts speed test, will be administered via tape.

Since many children will not know how to do the majority of the test, especially at the beginning of the study, they will no doubt want to ask questions or want you to repeat items yet again. Please do not allow this--instead, ask them to answer "as best they can" or to mark the "puzzled face." Note also that reading the answers to the children (with the exception of row I) is not advisable; for example, a child may ask what "28" is, or what a "+" sign is--it is considered part of the test to know (or not know) what "28" or "+" is!

Since this is a group-administered test, verbal exchanges with individual children can be distracting and interfering--try to establish a policy of not talking and not allowing the children to talk in between questions.

Should the above directions seem unnecessarily stringent, please realize that we are attempting to measure change over time and that we have very few questions on which to base this measurement. The children will take the other forms of this same test at 6 week intervals and then they will repeat the first form; hopefully each time they will be able to answer the questions more successfully.

Monitoring the Test. It is very desirable to have another adult in the room to help the children keep their places and to respond (as indicated above) to the inevitable questions. Both the test administrator, if possible, and the monitor should move about the room making sure that the children mark only one box in each row and also encouraging them to mark at least one box (the "puzzled face" if they do not know the answer). Monitoring is essential for the second part of the test, the taped basic fact items, to help the children keep their places.

Pacing the Test. Especially for the number story problems (questions G-H), it may take a "long" time for the children to figure out an answer. As a rule of thumb, allow the group to work on each question until only one or two children are still working. At that point, if necessary, suggest that anyone still working mark the "puzzled face" box. Then go on to the next question by saying, "Find Row ___."

The second part of the test, the taped basic facts questions is a speed test. Once the tape is started, it will not be stopped. You will find the directions for administering this section on page ___.

Preparations for Testing

Ask the children to clear their desks except for two pencils with erasers (or a separate eraser). They will not need scratch paper for this test. The children's names have been written on the tests in advance; distribute the tests, making sure each child has his/her own test.

Specific Directions

SAY: Today we are going to do some work in the booklet. You have already learned how to do some parts of the work. But, you have not learned how to do other parts yet. I don't expect you to know how to do all of the work now. I will come back next month, and again and again while you are in first grade . . . each time you will have learned how to do more of the work.

Find your name on the line. Look at the little box after your name. It has an X in it. Look at the big box right next to the little box. Use your pencil and make a big X in the big box. Try to make your X come all the way to the corners of the box. [*Check to see that the children have filled in the practice box correctly.*]

Now find the first row of boxes, row A. Put your finger by the A. [*Pause.*] I am going to ask you a question. You will answer by making a big X in one of the boxes. If you don't know the answer, you may make an X in the last box, the one with a puzzled face.

Look at the pictures in row A. Which box has a boat in it? Make an X in the box that has a boat in it. [*Pause.*] Remember,
EXAMPLE A if you don't know the answer, make an X in the last box, the one with a puzzled face. [*Check to see that the children mark only one box in the row.*]

Now find the next row of boxes, row B. Put your finger by the B. [*Pause.*] Look at the shape in the arrow. Make an X in the box that has a shape just like the shape in the arrow . . .
EXAMPLE B make an X in the box that has a shape just like the shape in the arrow. [*Pause.*] Remember, if you don't know the answer, make an X in the box with a puzzled face. [*Check to see that the children mark only one box in the row.*]

Now turn to the next page and fold your booklet, like this. [*Demonstrate, folding the cover page under.*] Put your finger by row C. [*Make sure all children are on page J1, row C.*]

C Look at the trees in the arrow. Make an X in the box that tells how many trees there are . . . make an X in the box that tells how many trees there are. [*Pause.*] Remember, if you don't know the answer, mark the box with a puzzled face.

[*Note: Starting with row C, do not assist the children with the test, except to make sure they are marking only one box . . . and at least one box. You may help with the words for row I.*]

[*Repeat "if you don't know the answer, make an X in the box with a puzzled face," frequently throughout the test.*]

D Find row D. Make an X in the box that has a seventeen in it . . . make an X in the box that has a seventeen in it.

E Find row E. Look at the number sentence in the arrow. Make an X on the missing number that will make the sentence true . . . make an X on the missing number that will make the sentence true.

F Row F. Look at the number sentence in the arrow. Make an X on the missing number that will make the sentence true . . . make an X on the missing number that will make the sentence true.

G Now turn to the next page and fold your booklet, like this. [*Demonstrate.*] Find row G. [*Make sure all children are on page J2, row G.*] I am going to read a number story about pencils. I will read the story twice. Listen both times before you mark a box. John had 12 pencils. He gave 7 pencils to Tim. How many pencils did John have left? [*Pause.*] John had 12 pencils. He gave 7 pencils to Tim. How many pencils did John have left? [*Allow plenty of time for the children to figure out their answers to rows G and H. If necessary, remind them to use the "face" box when they don't know the answer.*]

H Row H. This number story is about whistles. I will read the story twice. Listen both times before you mark a box. Debbie has 4 whistles. Her brother Bob has 7 whistles. How many more whistles does Bob have than Debbie? [*Pause.*] Debbie has 4 whistles. Her brother Bob has 7 whistles. How many more whistles does Bob have than Debbie?

I Row I. Look at the pails and shovels in the arrow. Are there more pails, more shovels, or the same number . . . more pails, more shovels, or the same number? [*If necessary, read the answer choices to the children.*]

J Row J. Which number is less than fourteen . . . which number is less than fourteen?

K Now turn to the next page and fold your booklet, like this. [*Demonstrate. Make sure all children are on page J3, row K.*] The work on this page is quite hard. Mark the puzzled face if you do not understand how to do the work. Find row K. Look at the number sentences. [*Pause.*] One of the number sentences tells <u>how</u> to find the answer for this story about balloons. After I read the story, make an X on the number sentence that tells <u>how</u> to find the answer. Kathy had 6 balloons. She gave 4 balloons to Jim. How many balloons did Kathy have left? [*Pause.*] Kathy had 6 balloons. She gave 4 balloons to Jim. How many balloons did Kathy have left?

[Note: Most children in the early test periods will no doubt be confused by rows K-N; don't be too hasty, however, about having them mark the "face" box. We may have a few children who somehow can interpret + - sentences!]

L Row L. This number story is about cards. After I read the story twice, mark the number sentence that tells how to find the answer. Bill has 4 football cards. He also has 9 baseball cards. How many cards does Bill have altogether? [*Pause.*] Bill has 4 football cards. He also has 9 baseball cards. How many cards does Bill have altogether?

M Row M. This number story is about a plant. Mark the number sentence that tells how to find the answer. A plant was 8 cubes tall. It grew some. Now it is 14 cubes tall. How much did it grow? [*Pause.*] A plant was 8 cubes tall. It grew some. Now it is 14 cubes tall. How much did it grow?

N Row N. This number story is about birds. Mark the number sentence that tells how to find the answer. 91 birds were in a tree. Some of the birds flew away. Now there are 55 birds in the tree. How many flew away? [*Pause.*] 91 birds were in a tree. Some of the birds flew away. Now there are 55 birds in the tree. How many flew away?

Now turn to the next page and fold your booklet, like this. [*Demonstrate.*] Find row O. [*Make sure all children are on page J4, row O.*]

O Look at the picture of the doghouse. We can see some puppies outside the doghouse. 9 puppies are inside the doghouse. We cannot see them. How many puppies are there altogether? . . . some puppies are outside . . . 9 puppies are inside . . . how many puppies are there altogether?

P Row P. We are going to count backwards, starting at 18. When we count backwards one number we get 17. When we count backwards two numbers we get 16. What do we get when we count backwards four numbers from 18 . . . what do we get when we count backwards four numbers from 18?

Q Row Q. What number is 5 less than 23 . . . 5 less than 23?

Turn to the last page.

60

The work on this page is different. I want to see how quickly you can think of answers in your mind. You will not have time to use your fingers to figure out the answers.

I am going to play a tape--the voice on the tape will say problems, like this: [*Play the four sample problems.*] The problems go quickly. Today you probably will not know very many answers, but when I come back and we do these problems again, you will know more. Don't feel bad if you don't know the answers today.

The voice on the tape will tell you where to write your answers. Get your pencil ready. [*Start tape.*]

Script on Tape: Look at the long row of boxes. Find box A. I am going to say problems like 1 + 1. The answer for 1 + 1 is 2. So there is a 2 in box A. Find box B. What is 2 + 2? 2 + 2 is 4. You write a 4 in box B.

[*There is a 20 second pause here. Move about the room and make sure the children are working in the top row on the page.*]

Now I am going to say problems for all the rest of the boxes in this row. I will not stop. Don't try to figure out the answer with your fingers. If you can't think of the answer quickly in your mind, leave the box empty. Ready?

FORM J

Box C	1 + 5
Box D	3 + 2
Box E	4 + 4
Box F	3 + 6
Box G	4 + 3
Box H	6 + 2
Box I	5 + 8
Box J	6 + 9
Box K	9 + 3

Stop working . . . stop working. You may rest for a minute . . . then we will work on the row of circles.

[*There is a 20 second pause here.*]

Ready to listen again? Find the row of circles. Put your finger under Circle A. This time I am going to say problems like 4 take away 1. The answer for 4 take away 1 is 3. So there is a 3 in circle A. Find circle B. What is 2 take away 1? 2 take away 1 is 1. You write a 1 in circle B.

[*There is a 20 second pause here. Move about the room and make sure the children are working on the bottom row.*]

Now I am going to say problems for the rest of the circles. I will not stop. If you can't think of the answer quickly in your mind, leave the circle empty. Ready?

FORM J

Circle C 5 - 1

Circle D 9 - 2

Circle E 8 - 7

Circle F 5 - 3

Circle G 7 - 6

Circle H 8 - 5

Circle I 14 - 7

Circle J 12 - 5

Circle K 11 - 8

Stop working . . . stop working. Put your pencil down. Turn back to the page with your name on it.

[*Stop the tape.*]

That is all the work we will do today. Remember, I will come again and you will do work like this again. Each time I come, you will be able to do more of the work.

[*Collect the booklets.*]

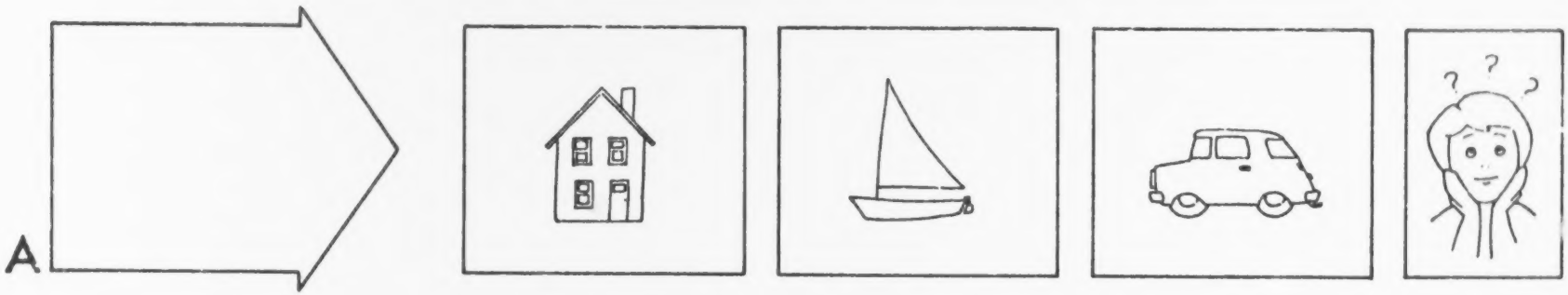
J

62

ID_ _ _ _ _ _ _ _ _

Date_____

Name _____ ☒



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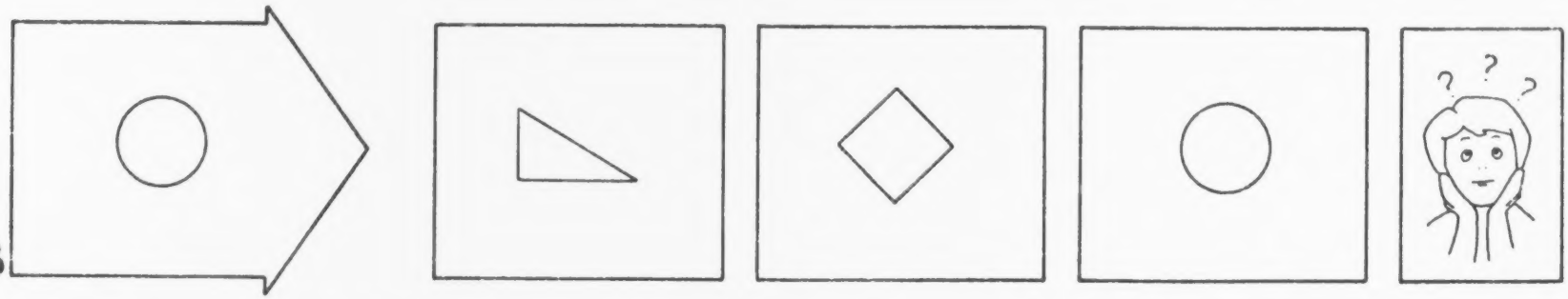
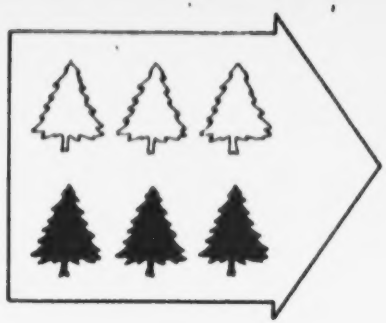


78 B

73

J.1

C



6	5	3

D

7	15	17

E

$2 + \square = 7$

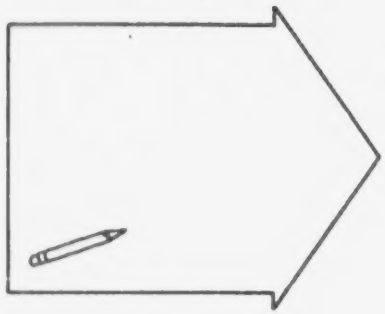
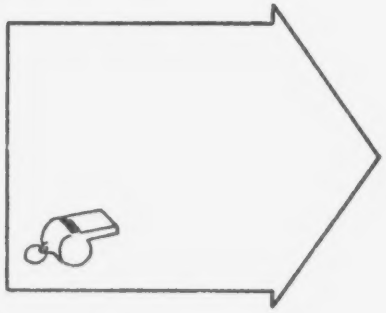
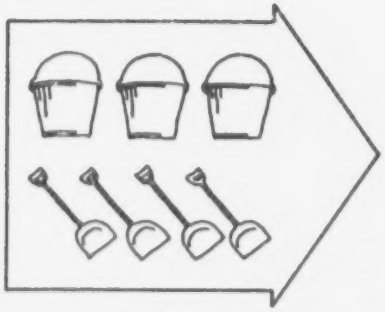
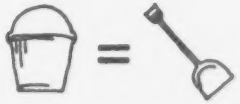
5	9	7

F

$8 - 6 = \square$

14	2	3

J2

G		6	19	5	
H		11	3	7	
I		more	more		
J		12	14	18	

64

82

83

J3

K

6 − 6 = □

6 + 4 = □

6 − 4 = □

L

9 − 4 = □

4 + 9 = □

94 = □

M

8 − 6 = □

14 + 8 = □

14 − 8 = □

N

91 + 55 = □

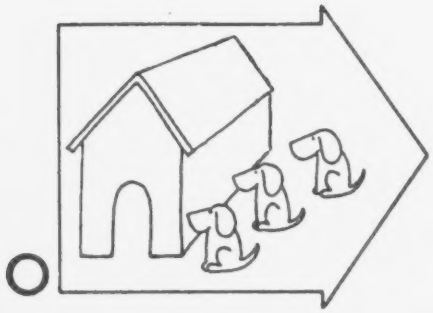
91 − 55 = □

91 + 36 = □

84

65

85



O

11	13	12

J4

99

P

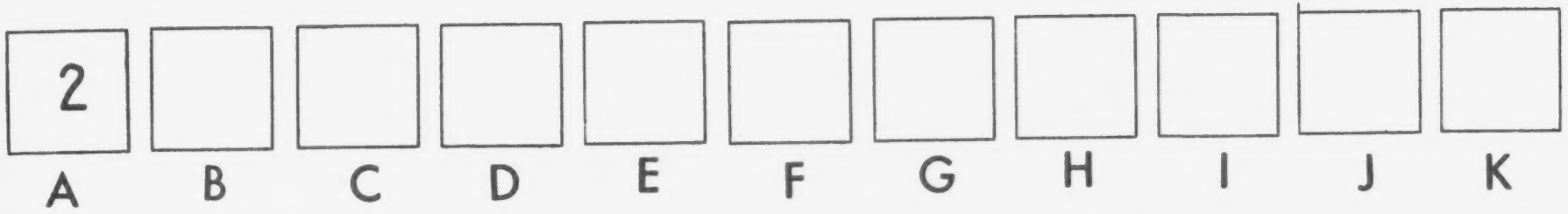
14	13	15

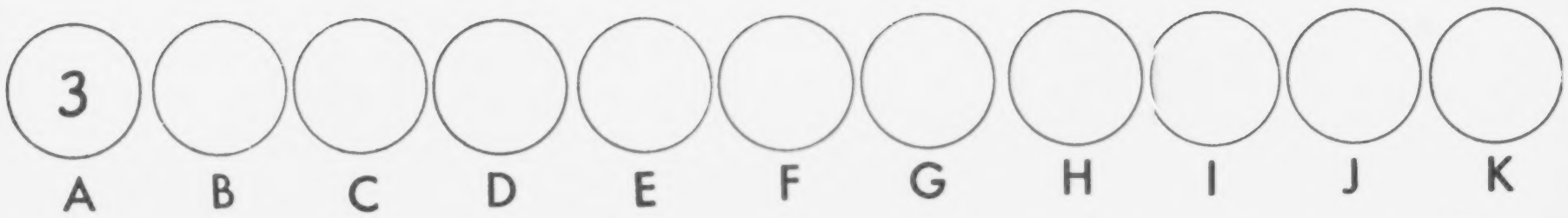
Q

20	19	18

86

87





88

89

67

K

Directions for Administering Achievement Monitoring Test K

68

Coordinated Study #1

General Directions

Reading the Test. This test is read aloud to the children. Read the questions exactly as they are printed in the directions; do not paraphrase. Each question is read twice--or the key phrases are repeated after the original question is read. Read the questions at a somewhat slower than conversational pace. The second part of the test, the basic facts speed test, will be administered via tape.

Since many children will not know how to do the majority of the test, especially at the beginning of the study, they will no doubt want to ask questions or want you to repeat items yet again. Please do not allow this--instead, ask them to answer "as best they can" or to mark the "puzzled face." Note also that reading the answers to the children (with the exception of row I) is not advisable; for example, a child may ask what "28" is, or what a "+" sign is--it is considered part of the test to know (or not know) what "28" or "+" is!

Since this is a group-administered test, verbal exchanges with individual children can be distracting and interfering--try to establish a policy of not talking and not allowing the children to talk in between questions.

Should the above directions seem unnecessarily stringent, please realize that we are attempting to measure change over time and that we have very few questions on which to base this measurement. The children will take the other forms of this same test at 6 week intervals and then they will repeat the first form; hopefully each time they will be able to answer the questions more successfully.

Monitoring the Test. It is very desirable to have another adult in the room to help the children keep their places and to respond (as indicated above) to the inevitable questions. Both the test administrator, if possible, and the monitor should move about the room making sure that the children mark only one box in each row and also encouraging them to mark at least one box (the "puzzled face" if they do not know the answer). Monitoring is essential for the second part of the test, the taped basic fact items, to help the children keep their places.

Pacing the Test. Especially for the number story problems (questions G-H), it may take a "long" time for the children to figure out an answer. As a rule of thumb, allow the group to work on each question until only one or two children are still working. At that point, if necessary, suggest that anyone still working mark the "puzzled face" box. Then go on to the next question by saying, "Find Row ___."

The second part of the test, the taped basic facts questions is a speed test. Once the tape is started, it will not be stopped. You will find the directions for administering this section on page ___.

Preparations for Testing

Ask the children to clear their desks except for two pencils with erasers (or a separate eraser). They will not need scratch paper for this test. The children's names have been written on the tests in advance; distribute the tests, making sure each child has his/her own test.

Specific Directions

SAY: Today we are going to do some work in this booklet. You have already learned how to do some parts of the work. But, you have not learned how to do other parts yet. I don't expect you to know how to do all of the work now. I will come back next month, and again and again while you are in first grade . . . each time you will have learned how to do more of the work.

Find your name on the line. Look at the little box after your name. It has an X in it. Look at the big box right next to the little box. Use your pencil and make a big X in the big box. Try to make your X come all the way to the corners of the box. [*Check to see that the children have filled in the practice box correctly.*]

Now find the first row of boxes, row A. Put your finger by the A. [*Pause.*] I am going to ask you a question. You will answer by making a big X in one of the boxes. If you don't know the answer, you may make an X in the last box, the one with a puzzled face.

EXAMPLE A

Look at the pictures in row A. Which box has a fish in it? Make an X in the box that has a fish in it. [*Pause.*] Remember, if you don't know the answer, make an X in the last box, the one with a puzzled face. [*Check to see that the children mark only one box in the row.*]

EXAMPLE B

Now find the next row of boxes, row B. Put your finger by the B. [*Pause.*] Look at the shape in the arrow. Make an X in the box that has a shape just like the shape in the arrow . . . make an X in the box that has a shape just like the shape in the arrow. [*Pause.*] Remember, if you don't know the answer, make an X in the box with a puzzled face. [*Check to see that the children mark only one box in the row.*]

Now turn to the next page and fold your booklet, like this. [*Demonstrate, folding the cover page under.*] Put your finger by row C. [*Make sure all children are on page K1, row C.*]

C

Look at the number in the arrow. Make an X in the box which has that many turtles in it . . . make an X in the box that has that many turtles in it. [*Pause.*] Remember, if you don't know the answer, mark the box with a puzzled face.

[*Note: Starting with row C, do not assist the children with the test, except to make sure they are marking only one box . . . and at least one box. You may help with the words for row I.*]

[*Repeat, "if you don't know the answer, make an X in the box with the puzzled face," frequently throughout the test.*]

D Find row D. Look at the kittens in the arrow. Make an X in the box that tells how many kittens there are . . . make an X in the box that tells how many kittens there are.

E Find row E. Look at the number sentence in the arrow. Make an X on the missing number that will make the sentence true . . . make an X on the missing number that will make the sentence true.

F Find row F. Look at the number sentence in the arrow. Make an X on the missing number that will make the sentence true . . . make an X on the missing number that will make the sentence true.

Now turn to the next page and fold your booklet, like this. [*Demonstrate.*] Find row G. [*Make sure all children are on page K2, row G.*]

G I am going to read a number story about toy airplanes. I will read the story twice. Listen both times before you mark a box. David has 9 toy airplanes. His sister Nancy has 13 toy airplanes. How many more toy airplanes does Nancy have than David? [*Pause.*] David has 9 toy airplanes. His sister Nancy has 13 toy airplanes. How many more toy airplanes does Nancy have than David? [*Allow plenty of time for the children to figure out their answers to rows G and H. If necessary, remind them to use the "face" box when they don't know the answer.*]

H Row H. This number story is about cupcakes. I will read the story twice. Listen both times before you mark a box. Tom has 2 chocolate cupcakes. He also has 3 white cupcakes. How many cupcakes does Tom have altogether? [*Pause.*] Tom has 2 chocolate cupcakes. He also has 3 white cupcakes. How many cupcakes does Tom have altogether?

I Row I. Look at the cups and saucers in the arrow. Are there the same number of cups as saucers . . . the same number of cups as saucers? [*If necessary, read the answer choices to the children.*]

J Row J. Look at the numbers in the arrow. What number should come next . . . what number should come next?

Now turn to the next page and fold your booklet, like this. [*Demonstrate. Make sure all children are on page K3, row K.*]

K The work on this page is quite hard. Mark the puzzled face if you do not understand how to do the work. Find row K. Look at the number sentences. [*Pause.*] One of the number sentences tells <u>how</u> <u>to</u> <u>find</u> the answer for this story about pennies. After I read the story, make an X on the number sentence that tells <u>how</u> <u>to</u> <u>find</u> the answer.

Sarah has 5 pennies. Her brother Ricky has 7 pennies. How many more pennies does Ricky have than Sarah? [*Pause.*] Sarah has 5 pennies. Her brother Ricky has 7 pennies. How many more pennies does Ricky have than Sarah?

[Note: Most children in the early test periods will no doubt be confused by rows K-N; don't be too hasty, however, about having them mark the "face" box. We may have a few children who somehow can interpret + sentences.]

L

Row L. This number story is about hats. After I read the story twice, mark the number sentence that tells how to find the answer. Karla had 15 hats. She gave 9 hats to Steve. How many hats did Karla have left? [*Pause.*] Karla had 15 hats. She gave 9 hats to Steve. How many hats did Karla have left?

M

Row M. This number story is about links. Mark the number sentence that tells how to find the answer. Patty made a chain of links. She used 3 links first. Then she used 8 more links. How many links long is her chain? [*Pause.*] Patty made a chain of links. She used 3 links first, Then she used 8 more links. How many links long is her chain?

N

Row N. This number story is about things to drink. Mark the number sentence that tells how to find the answer. There are 11 glasses on the table. 5 have orange juice in them. The rest have milk in them. How many glasses have milk in them? [*Pause.*] There are 11 glasses on the table. 5 have orange juice in them. The rest have milk in them. How many glasses have milk in them?

Now turn to the next page and fold your booklet like this. [*Demonstrate.*] Find row O. [*Make sure all children are on page K4, row O.*]

O

We are going to count up from the number 12. When we count up one number from 12 we get 13. When we count up two numbers from 12 we get 14. What do we get when we count up five numbers from 12 . . . what do we get when we count up five numbers from 12?

P

Row P. Look at the garage and the cars. There are 15 cars altogether. We can see some cars outside the garage. The rest are inside the garage. How many cars are inside the garage? . . . There are 15 cars altogether . . . some are outside . . . the rest are inside . . . how many are inside?

Q

Row Q. I am going to tell you about some numbers . . . listen . . . 24 comes 1 number after 23 . . . 25 comes 2 numbers after 23 . . . what number comes 6 numbers after 23 . . . what number comes 6 numbers after 23?

Turn to the last page.

72

The work on this page is different. I want to see how quickly you can think of answers in your mind. You will not have time to use your fingers to figure out the answers.

I am going to play a tape--the voice on the tape will say problems, like this: [*Play the four sample problems.*] The problems go quickly. Today you probably will not know very many answers, but when I come back and we do these problems again, you will know more. Don't feel bad if you don't know the answers today.

The voice on the tape will tell you where to write your answers. Get your pencil ready. [*Start tape.*]

Script on Tape: Look at the long row of boxes. Find box A. I am going to say problems like 1 + 1. The answer for 1 + 1 is 2. So there is a 2 in box A. Find box B. What is 2 + 2? 2 + 2 is 4. You write a 4 in box B.

[*There is a 20 second pause here. Move about the room and make sure the children are working in the top row on the page.*]

Now I am going to say problems for all the rest of the boxes in this row. I will not stop. Don't try to figure out the answer with your fingers. If you can't think of the answer quickly in your mind, leave the box empty. Ready?

Box C	3 + 1
Box D	2 + 5
Box E	1 + 6
Box F	7 + 2
Box G	2 + 6
Box H	3 + 5
Box I	4 + 8
Box J	3 + 7
Box K	5 + 9

FORM K

Stop working . . . stop working. You may rest for a minute . . . then we will work on the row of circles.

[*There is a 30 second pause here.*]

Ready to listen again? Find the row of circles. Put your finger under Circle A. This time I am going to say problems like 4 take away 1. The answer for 4 take away 1 is 3. So there is a 3 in circle A. Find circle B. What is 2 take away 1? 2 take away 1 is 1. You write a 1 in circle B.

[*There is a 20 second pause here. Move about the room and make sure the children are working on the bottom row.*]

Now I am going to say problems for the rest of the circles. I will not stop. If you can't think of the answer quickly in your mind, leave the circle empty. Ready?

FORM K

Circle C	7 - 1
Circle D	8 - 4
Circle E	9 - 5
Circle F	7 - 4
Circle G	8 - 6
Circle H	4 - 3
Circle I	11 - 2
Circle J	13 - 8
Circle K	11 - 7

Stop working . . . stop working. Put your pencil down. Turn back to the page with your name on it.

[*Stop the tape.*]

That is all the work we will do today. Remember, I will come again and you will do work like this again. Each time I come, you will be able to do more of the work.

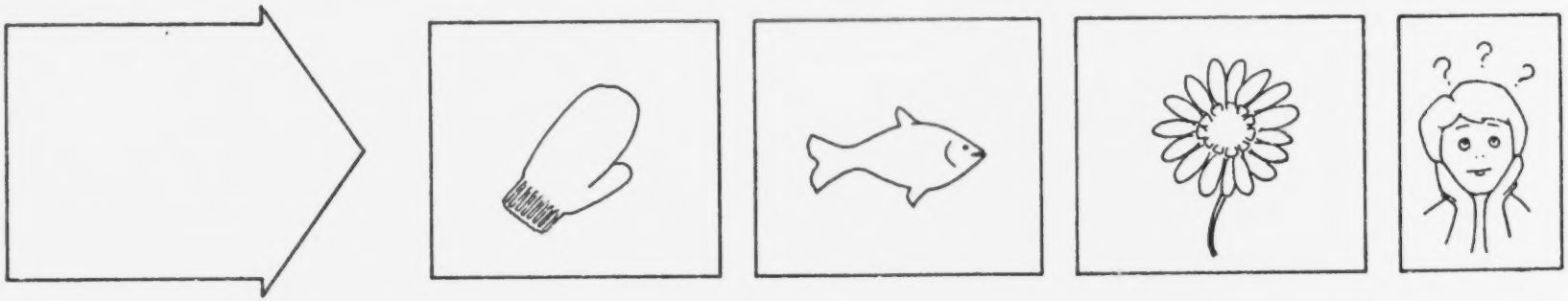
[*Collect the booklets.*]

ID_ _ _ _ _ _ _ _ _

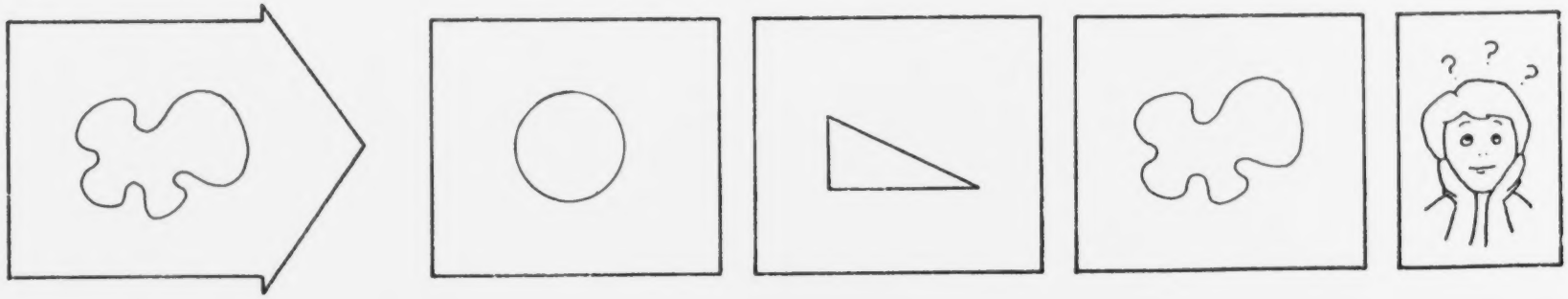
Date_____

Name _____

A



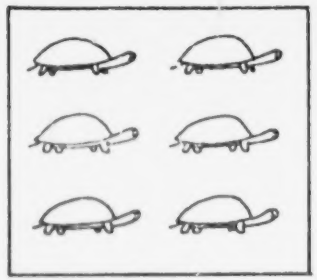
B

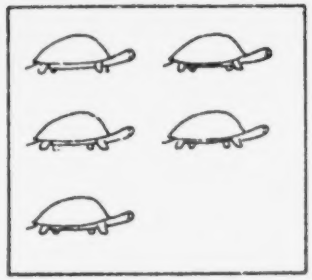


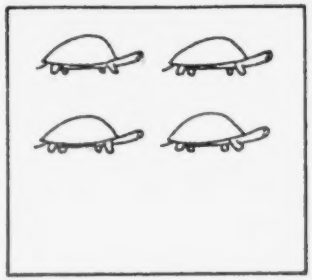
K1

C

5







D

11

10

9

E

5 + 0 = □

0

50

5

F

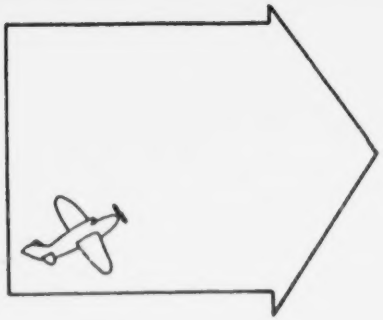
14 − 8 = □

6

7

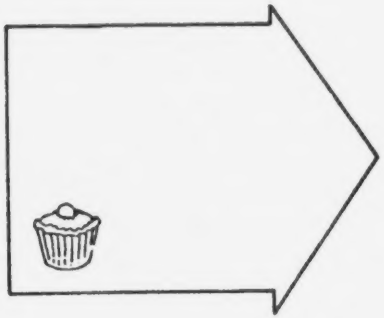
8

G



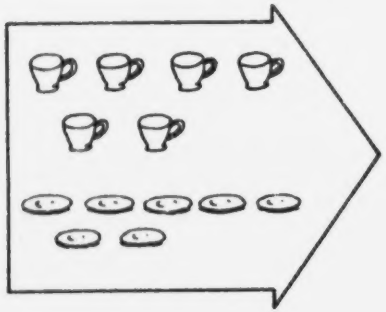
4	13	5	

H



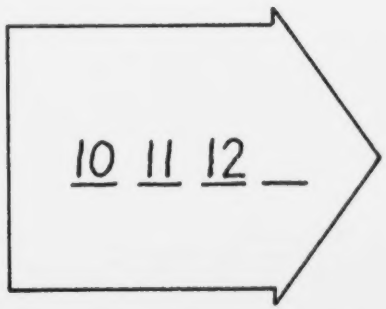
3	5	1	

I



yes	no	

J



9	14	13	

K3

K

$7 \square 5 = \square$

$7 + 5 = \square$

$7 - 5 = \square$

L

$15 + 9 = \square$

$15 - 9 = \square$

$9 - 6 = \square$

M

$8 + 8 = \square$

$8 - 3 = \square$

$3 + 8 = \square$

N

$11 + 5 = \square$

$11 + 6 = \square$

$11 - 5 = \square$

77

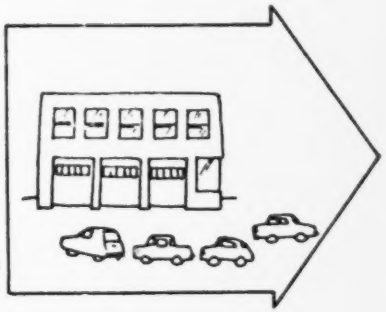
O

17

16

15

P



12

11

10

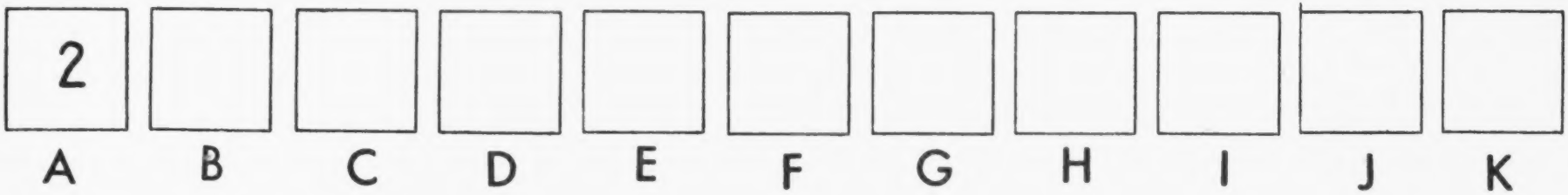
Q

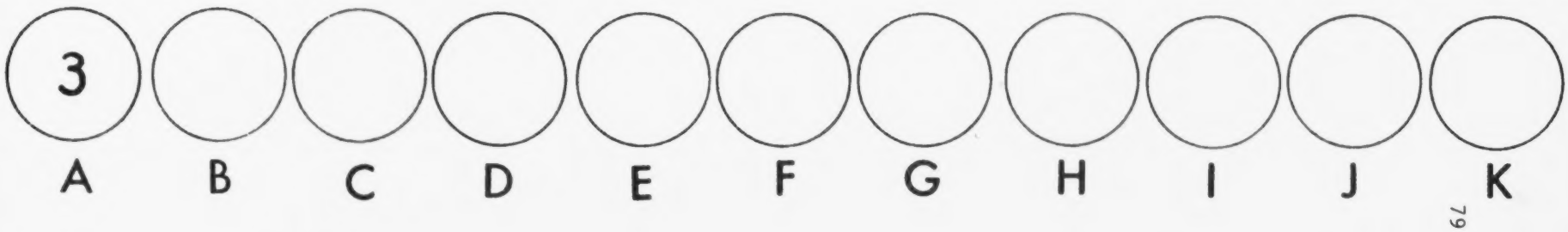
28

29

30

K5





76

L

Directions for Administering Achievement Monitoring Test L

Coordinated Study #1

General Directions

Reading the Test. This test is read aloud to the children. Read the questions exactly as they are printed in the directions; do not paraphrase. Each question is read twice--or the key phrases are repeated after the original question is read. Read the questions at a somewhat slower than conversational pace. The second part of the test, the basic facts speed test, will be administered via tape.

Since many children will not know how to do the majority of the test, especially at the beginning of the study, they will no doubt want to ask questions or want you to repeat items yet again. Please do not allow this--instead, ask them to answer "as best they can" or to mark the "puzzled face." Note also that reading the answers to the children (with the exception of row I) is not advisable; for example, a child may ask what "28" is, or what a "+" sign is--it is considered part of the test to know (or not know) what "28" or "+" is!

Since this is a group-administered test, verbal exchanges with individual children can be distracting and interfering--try to establish a policy of not talking and not allowing the children to talk in between questions.

Should the above directions seem unnecessarily stringent, please realize that we are attempting to measure change over time and that we have very few questions on which to base this measurement. The children will take the other forms of this same test at 6 week intervals and then they will repeat the first form; hopefully each time they will be able to answer the questions more successfully.

Monitoring the Test. It is very desirable to have another adult in the room to help the children keep their places and to respond (as indicated above) to the inevitable questions. Both the test administrator, if possible, and the monitor should move about the room making sure that the children mark only one box in each row and also encouraging them to mark at least one box (the "puzzled face" if they do not know the answer). Monitoring is essential for the second part of the test, the taped basic fact items, to help the children keep their places.

Pacing the Test. Especially for the number story problems (questions G-H), it may take a "long" time for the children to figure out an answer. As a rule of thumb, allow the group to work on each question until only one or two children are still working. At that point, if necessary, suggest that anyone still working mark the "puzzled face" box. Then go on to the next question by saying, "Find Row ___."

The second part of the test, the taped basic facts questions , is a speed test. Once the tape is started, it will not be stopped. You will find the directions for administering this section on page ___.

Ask the children to clear their desks except for two pencils with erasers (or a separate eraser). They will not need scratch paper for this test. The children's names have been written on the tests in advance; distribute the tests, making sure each child has his/her own test.

Specific Directions

SAY: Today we are going to do some work in this booklet. You have already learned how to do some parts of the work. But, you have not learned how to do other parts yet. I don't expect you to know how to do all of the work now. I will come back next month, and again and again while you are in the first grade . . . each time you will have learned how to do more of the work.

Find your name on the line. Look at the little box after your name. It has an X in it. Look at the big box right next to the little box. Use your pencil and make a big X in the big box. Try to make your X come all the way to the corners of the box. [*Check to see that the children have filled in the practice box correctly.*]

Now find the first row of boxes, row A. Put your finger by the A. [*Pause.*] I am going to ask you a question. You will answer by making a big X in one of the boxes. If you don't know the answer, you may make an X in the last box, the one with a puzzled face.

Look at the pictures in row A. Which box has a rabbit in it? Make an X in the box that has a rabbit in it. [*Pause.*] Remember,
EXAMPLE A if you don't know the answer, make an X in the last box, the one with a puzzled face. [*Check to see that the children mark only one box in the row.*]

Now find the next row of boxes, row B. Put your finger by the B. [*Pause.*] Look at the shape in the arrow. Make an X in the
EXAMPLE B box that has a shape just like the shape in the arrow . . . make an X in the box that has a shape just like the shape in the arrow. [*Pause.*] Remember, if you don't know the answer, make an X in the box with a puzzled face. [*Check to see that the children mark only one box in the row.*]

Now turn to the next page and fold your booklet, like this.
C [*Demonstrate, folding the cover page under.*] Put your finger by row C. [*Make sure all children are on page L1, row C.*] Look at the boxes. Make an X in the box that has seven apples in it . . . make an X in the box that has seven apples in it. [*Pause.*] Remember, if you don't know the answer, mark the box with a puzzled face.

82

[*Repeat "if you don't know the answer, make an X in the box with a puzzled face," frequently throughout the test.*]

[*Note: Starting with row C, do not assist the children with the test, except to make sure they are marking only one box . . . and at least one box.*]

D Find row D. Look at the dots in the arrow. Make an X in the box that tells how many dots there are . . . make an X in the box that tells how many dots there are.

E Find row E. Look at the number sentence in the arrow. Make an X on the missing number that will make the sentence true . . . make an X on the missing number that will make the sentence true.

F Row F. Look at the problem in the arrow. What number is the answer . . . what number is the answer?

Now turn to the next page and fold your booklet, like this. [*Demonstrate.*] Find row G. [*Make sure all children are on page L2, row G.*] I am going to read a number story about fish. I will read the story twice. Listen both times before you mark a

G box. Judy has 6 little fish. She also has 9 big fish. How many fish does Judy have altogether? [*Pause.*] Judy has 6 little fish. She also has 9 big fish. How many fish does Judy have altogether? [*Allow plenty of time for the children to figure out their answers to rows G and H. If necessary, remind them to use the "face" box when they don't know the answer.*]

H Row H. This number story is about books. I will read the story twice. Listen both times before you mark a box. Paul has 5 books. He gave 3 books to Carol. How many books did Paul have left? [*Pause.*] Paul had 5 books. He gave 3 books to Carol. How many books did Paul have left?

I Row I. Look at the dogs in the arrow. Mark the box that shows a doghouse for each dog . . . a doghouse for each dog.

J Row J. Look at the numbers in the arrow. Mark the box that has the numbers in order from largest to smallest . . . in order from largest to smallest.

Now turn to the next page and fold your booklet, like this. [*Demonstrate. Make sure all children are on page L3, row K.*] The work on this page is quite hard. Mark the puzzled face if you do not understand how to do the work. Find row K. Look

K at the number sentences. [*Pause.*] One of the number sentences tells <u>how</u> to find the answer for this story about marbles. After I read the story, mark an X on the number sentence that tells <u>how</u> to find the answer. Sally has 8 marbles. Her brother Mike has 14 marbles. How many more marbles does Mike have than Sally? [*Pause.*] Sally has 8 marbles. Her brother Mike has 14 marbles. How many more marbles does Mike have than Sally?

[Note: Most children in the early test periods will no doubt be confused by rows K-N; don't be too hasty, however, about having them mark the "face" box. We may have a few children who somehow <u>can</u> interpret ± sentences!]

Row L. This number story is about trucks. After I read the story twice, mark the number sentence that tells how to find the answer.

L Jack has 3 old trucks. He also has 4 new trucks. How many trucks does Jack have altogether? [*Pause.*] Jack has 3 old trucks. He also has 4 new trucks. How many trucks does Jack have altogether?

Row M. This number story is about frogs. Mark the number sentence that tells how to find the answer. There were 9 frogs in the pond.

M Some more frogs came. Now there are 12 frogs. How many frogs came? [*Pause.*] There were 9 frogs in the pond. Some more frogs came. Now there are 12 frogs. How many frogs came?

Row N. This number story is about trees. Mark the number sentence that tells how to find the answer. Mrs. Turner had 67 trees.

N 29 trees were pine trees and the rest were oak trees. How many trees were oak trees? [*Pause.*] Mrs. Turner had 67 trees. 29 trees were pine trees and the rest were oak trees. How many trees were oak trees?

Now turn to the next page and fold your booklet, like this. [*Demonstrate.*] Find row O. [*Make sure all children are on page L4, row O.*]

O I am going to tell you about some numbers . . . listen . . . 16 comes one number before 17. 15 comes two numbers before 17. What number comes 5 numbers before 17 . . . 5 numbers before 17?

P Row P. What number is 3 more than 28 . . . 3 more than 28?

Row Q. Look at the picture in the arrow. Mr. Smith wants to buy 14 oranges. He has put 9 oranges in the cart already. They are

Q on the bottom of the cart--you cannot see them. How many more oranges does he need? [*Pause.*] Mr. Smith wants 14 oranges. He has 9 oranges in the cart. How many more oranges does he need?

Turn to the last page.

84

The work on this page is different. I want to see how quickly you can think of answers in your mind. You will not have time to use your fingers to figure out the answers.

I am going to play a tape--the voice on the tape will say problems, like this: [*Play the four sample problems.*] The problems go quickly. Today you probably will not know very many answers, but when I come back and we do these problems again, you will know more. Don't feel bad if you don't know the answers today.

The voice on the tape will tell you where to write your answers. Get your pencil ready. [*Start tape.*]

Script on Tape: Look at the long row of boxes. Find box A. I am going to say problems like 1 + 1. The answer for 1 + 1 is 2. So there is a 2 in box A. Find box B. What is 2 + 2? 2 + 2 is 4. You write a 4 in box B.

[*There is a 20 second pause here. Move about the room and make sure the children are working in the top row on the page.*]

Now I am going to say problems for all the rest of the boxes in this row. I will not stop. Don't try to figure out the answer with your fingers. If you can't think of the answer quickly in your mind, leave the box empty. Ready?

Box C	2 + 4
Box D	6 + 3
Box E	5 + 2
Box F	2 + 3
Box G	5 + 0
Box H	1 + 3
Box I	9 + 2
Box J	6 + 6
Box K	4 + 7

FORM L

Stop working . . . stop working. You may rest for a minute . . . then we will work on the row of circles.

[*There is a 20 second pause here.*]

Ready to listen again? Find the row of circles. Put your finger under Circle A. This time I am going to say problems like 4 take away 1. The answer for 4 take away 1 is 3. So there is a 3 in circle A. Find circle B. What is 2 take away 1? 2 take away 1 is 1. You write a 1 in circle B.

[*There is a 20 second pause here. Move around the room and make sure the children are working on the bottom row.*]

Now I am going to say problems for the rest of the circles. I will not stop. If you can't think of the answer quickly in your mind, leave the circle empty. Ready?

FORM L

Circle C 3 - 2

Circle D 6 - 4

Circle E 9 - 1

Circle F 7 - 3

Circle G 6 - 1

Circle H 7 - 5

Circle I 10 - 4

Circle J 13 - 9

Circle K 14 - 8

Stop working . . . stop working. Put your pencil down. Turn back to the page with your name on it.

[*Stop the tape.*]

That is all the work we will do today. Remember, I will come again and you will do work like this again. Each time I come, you will be able to do more of the work.

[*Collect the booklets.*]

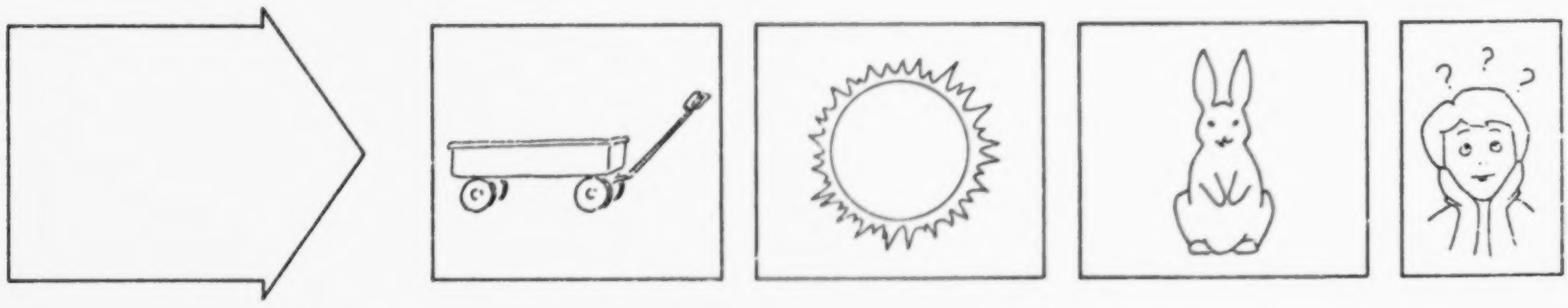
L

86

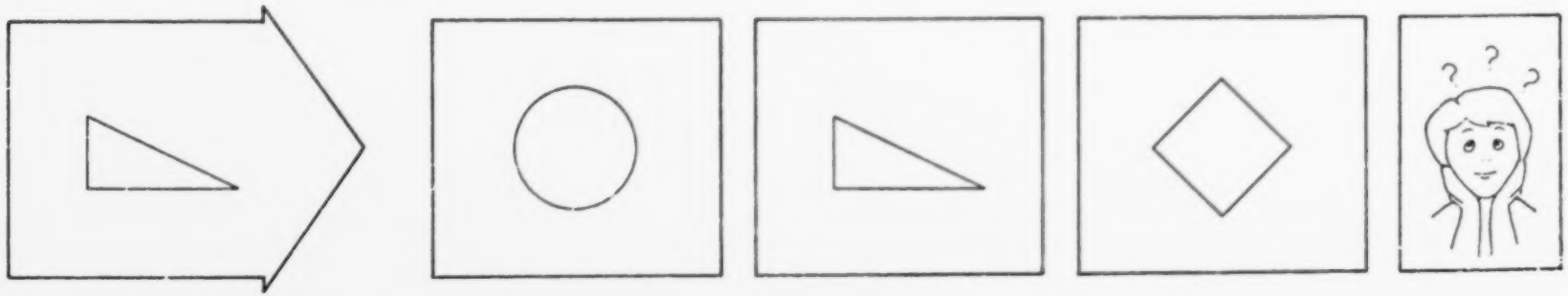
ID_ _ _ _ _ _ _ _ _

Date_____

Name _____



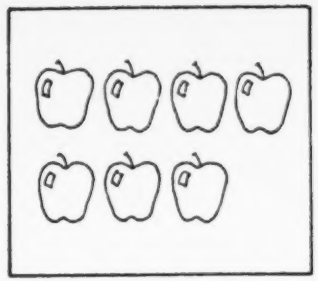
A

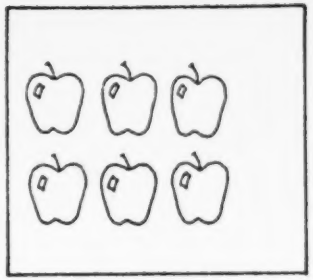


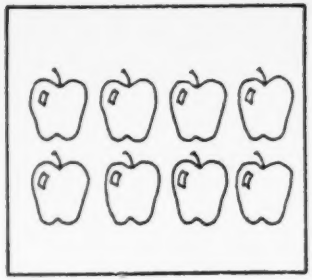
B

L1

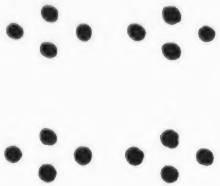
C







D



18

16

14

E

5 + 8 = □

12

13

3

F

9
-2

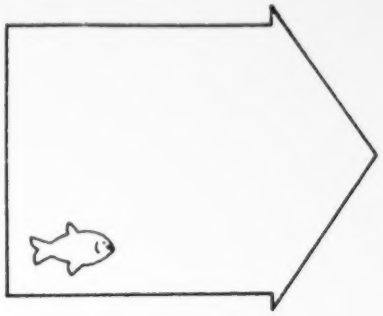
7

6

11

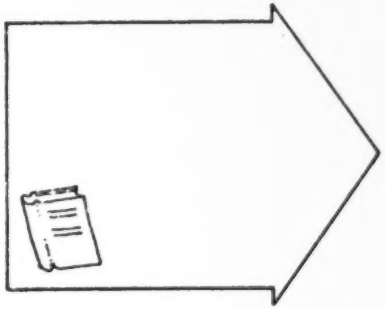
87

G



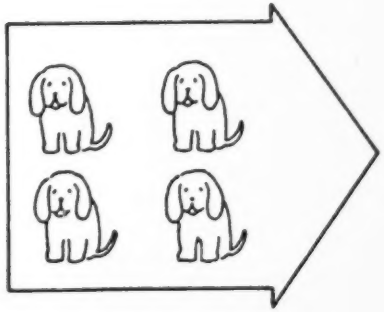
3	14	15

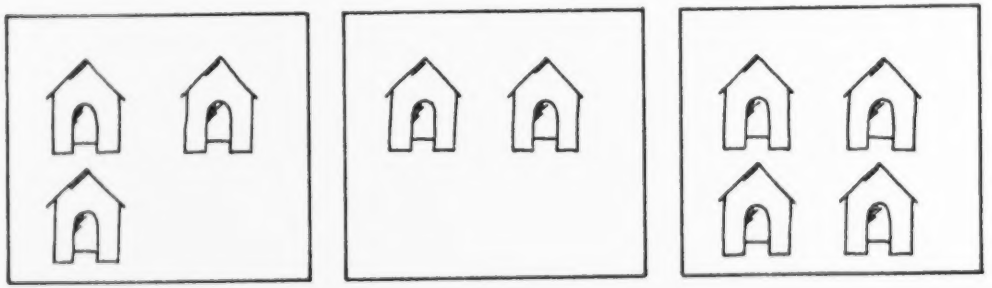
H



2	3	8

I





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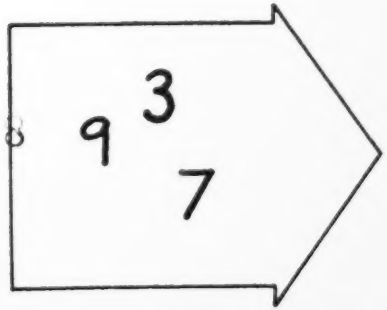


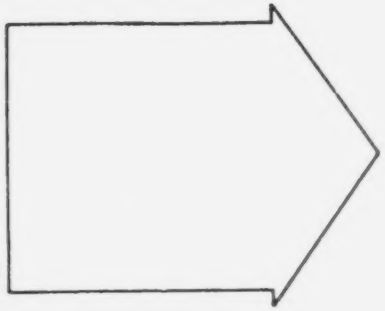
9, 3, 7	9, 7, 3	3, 9, 7

L3

K	$14+8=\square$	$14-8=\square$	$14+6=\square$	
L	$4-3=\square$	$4+4=\square$	$3+4=\square$	
M	$12-8=\square$	$12+9=\square$	$12-9=\square$	
N	$67+29=\square$	$67-29=\square$	$67+67=\square$	

68

O



13

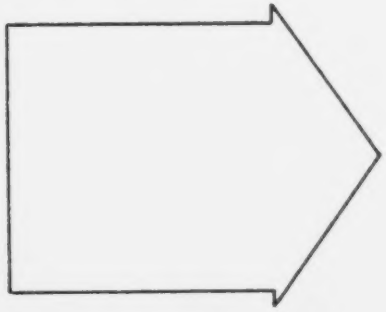
14

12

64

90

P

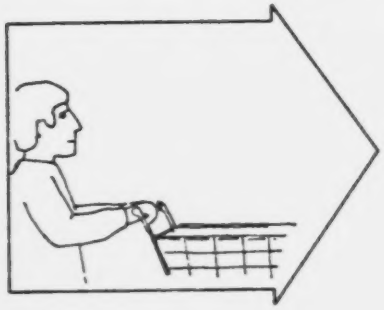


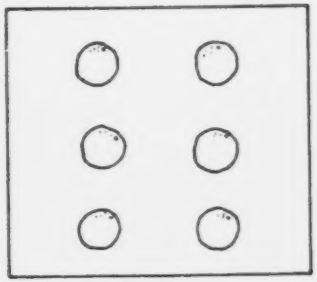
31

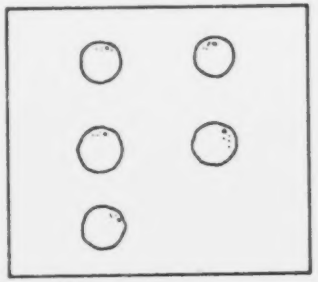
30

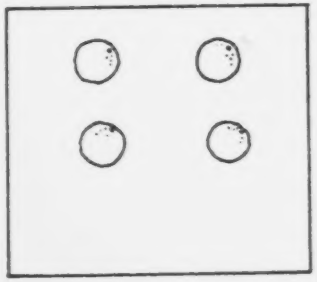
32

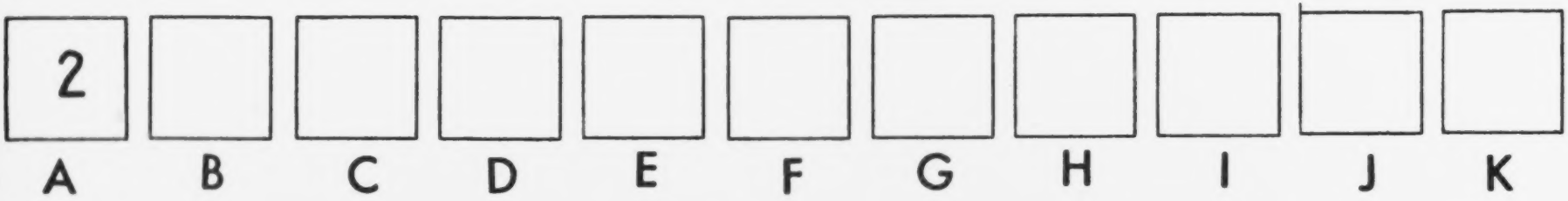
Q










2
A
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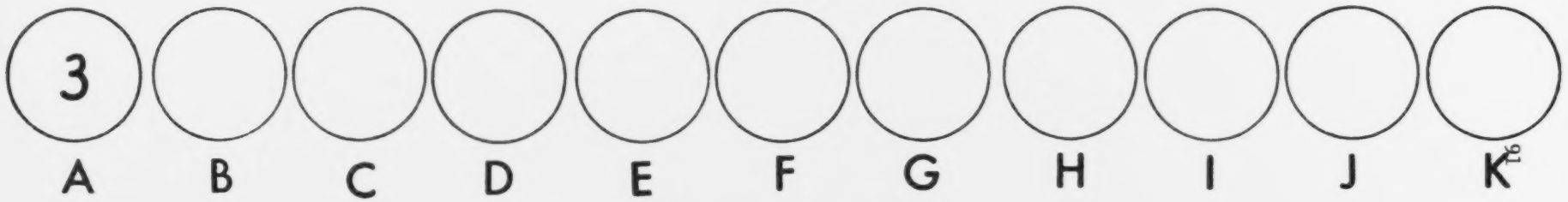
J
K


3
A
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J
K

APPENDIX B

ITEM STATISTICS FOR FORMS J, K, L

FOR THE TOTAL POPULATION

ADMINISTRATION TIME:
BASELINE

LERTAP 2.0 SUMMARY ITEM STATISTICS PAGE 28

TEST NO 1 ACHIEVEMENT MONITORING, INST. J SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 1

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		MEANS ST	MEANS TT
C 1	1	55	96.5	C	.25	.19	.47	.37	C	7.38	14.55
2	0	0	.0		.00	.00	.00	.00		.00	.00
3	0	1	1.8		-.07	-.11	-.20	-.34		6.00	9.00
4	0	1	1.8		-.28	-.16	-.85	-.47		2.00	7.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
6	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		57									

ITEM DESCRIPTIONS
Numerousness 0-10

ITEM NUMBER 2

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		MEANS ST	MEANS TT
1	0	0	.0		.00	.00	.00	.00		.00	.00
2	0	0	.0		.00	.00	.00	.00		.00	.00
C 3	1	55	96.5	C	.25	.06	.47	.11	C	7.38	14.38
4	0	1	1.8		-.07	.01	-.20	.04		6.00	15.00
5	0	1	1.8		-.28	-.09	-.85	-.28		2.00	10.00
6	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		57									

Numerousness 11-20

ITEM NUMBER 3

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		MEANS ST	MEANS TT
C 1	1	10	17.5	C	.43	.25	.60	.37	C	9.60	17.70
2	0	12	21.1		.12	.10	.16	.25		7.83	16.50
3	0	17	29.8		-.19	-.18	-.25	-.24		6.53	12.59
4	0	15	26.3		-.14	-.06	-.19	-.07		6.67	13.73
5	0	0	.0		.00	.00	.00	.00		.00	.00
6	0	3	5.3		-.27	-.28	-.57	-.57		4.33	7.00
TOTAL		57									

Open Sentences
Addition 0-9

ITEM NUMBER 4

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		MEANS ST	MEANS TT
1	0	4	7.0		-.14	-.09	-.26	-.17		6.00	12.25
C 2	1	16	28.1	C	.43	.41	.57	.55	C	9.00	18.44
3	0	13	22.8		.16	.11	.22	.16		8.00	15.62
4	0	24	42.1		-.45	-.42	-.57	-.53		5.92	11.21
5	0	0	.0		.00	.00	.00	.00		.00	.00
6	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		57									

Open Sentences
Subtraction 0-9

TEST NO 1 ACHIEVEMENT MONITORING, INST. J SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 5

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
1	0	24	42.1		-.26	-.34	-.33	-.43		6.50	11.79	
2	0	0	.0		.00	.00	.00	.00		.00	.00	
C 3	1	27	47.4	C	.35	.34	.43	.43	C	8.19	16.59	Problem Solving
4	0	5	8.8		-.03	.06	-.06	.11		7.00	15.00	Subt-simple separating 11-15
5	0	0	.0		.00	.00	.00	.00		.00	.00	
0	0	1	1.8		-.28	-.16	-.85	-.47		2.00	7.00	
TOTAL		57										

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
1	0	4	7.0		-.08	.05	-.16	.10		6.50	15.50	
C 2	1	28	49.1	C	.40	.28	.50	.35	C	8.29	16.11	Problem Solving
3	0	19	33.3		-.28	-.27	-.36	-.35		6.26	11.89	Subt-comparison 5-9
4	0	6	10.5		-.15	-.08	-.25	-.14		6.17	12.83	
5	0	0	.0		.00	.00	.00	.00		.00	.00	
0	0	0	.0		.00	.00	.00	.00		.00	.00	
TOTAL		57										

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
1	0	0	.0		.00	.00	.00	.00		.00	.00	
C 2	1	51	89.5	C	.44	.46	.71	.75	C	7.65	15.31	
3	0	2	3.5		-.21	-.24	-.50	-.57		4.50	6.50	Ordering Sets
4	0	4	7.0		-.38	-.39	-.73	-.73		3.75	5.50	One-to-one correspondence
5	0	0	.0		.00	.00	.00	.00		.00	.00	
0	0	0	.0		.00	.00	.00	.00		.00	.00	
TOTAL		57										

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	46	80.7	C	.35	.29	.50	.42	C	7.70	15.22	
2	0	0	.0		.00	.00	.00	.00		.00	.00	
3	0	6	10.5		-.13	-.22	-.21	-.37		6.33	10.33	Ordering Numbers 0-20
4	0	4	7.0		-.41	-.20	-.78	-.38		3.50	9.75	
5	0	0	.0		.00	.00	.00	.00		.00	.00	
0	0	1	1.8		.04	.01	.12	.04		8.00	15.00	
TOTAL		57										

TEST NO 1 ACHIEVEMENT MONITORING, INST. J SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 9

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST MEAN	TT MEAN
1	0	5	8.8		-.16	-.15	-.28	-.27		6.00	11.20
2	0	5	8.8		.02	-.05	.03	-.08		7.40	13.40
C 3	1	15	26.3	C	.60	.41	.81	.55	C	9.80	18.60
4	0	32	56.1		-.45	-.25	-.57	-.31		6.25	12.94
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		57									

Sentence Writing (A)
Subt-simple separating 5-9

ITEM NUMBER 10

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST MEAN	TT MEAN
1	0	8	14.0		-.14	-.00	-.22	-.13		6.37	13.00
C 2	1	17	29.8	C	.71	.52	.93	.69	C	10.00	19.35
3	0	5	8.8		-.11	-.20	-.19	-.36		6.40	10.20
4	0	25	43.9		-.55	-.38	-.70	-.48		5.68	11.64
5	0	1	1.8		.04	.01	.12	.04		8.00	15.00
0	0	1	1.8		.20	.25	.60	.76		11.00	26.00
TOTAL		57									

Sentence Writing (A)
Add-part part whole 11-15

ITEM NUMBER 11

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST MEAN	TT MEAN
1	0	2	3.5		-.10	-.02	-.23	-.06		6.00	13.50
2	0	21	36.8		.37	.20	.47	.26		8.48	15.95
C 3	1	8	14.0	C	.04	-.00	.06	-.01	C	7.50	14.25
4	0	26	45.6		-.35	-.18	-.44	-.23		6.31	13.08
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		57									

Sentence Writing (B)
Subt-join-addend 11-15

ITEM NUMBER 12

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST MEAN	TT MEAN
1	0	9	15.8		.18	.12	.28	.19		8.33	16.11
C 2	1	10	17.5	C	.48	.35	.71	.52	C	9.90	19.10
3	0	11	19.3		-.09	-.22	-.12	-.31		6.82	11.55
4	0	27	47.4		-.43	-.19	-.54	-.24		6.11	13.07
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		57									

Sentence Writing (B)
Subt-unknown subtrahend 0-99

TEST NO 1 ACHIEVEMENT MONITORING, INST. J SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 13

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST MEANS	TT MEANS
1	0	5	8.8		-.20	-.03	-.36	-.17		5.60	12.40
2	0	9	15.8		-.29	-.34	-.44	-.52		5.56	9.33
C 3	1	38	66.7	C	.58	.51	.74	.66	C	8.29	16.58
4	0	5	8.8		-.38	-.31	-.67	-.56		4.20	8.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
6	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		57									

Counting On 9-18

ITEM NUMBER 14

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST MEANS	TT MEANS
C 1	1	23	40.4	C	.34	.34	.43	.43	C	8.30	16.91
2	0	9	15.8		.20	.22	.31	.34		8.44	17.56
3	0	9	15.8		-.18	-.31	-.27	-.47		6.22	9.78
4	0	16	28.1		-.39	-.30	-.52	-.40		5.69	11.31
5	0	0	.0		.00	.00	.00	.00		.00	.00
6	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		57									

Counting Back 9-18

ITEM NUMBER 15

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST MEANS	TT MEANS
1	0	8	14.0		-.12	-.18	-.19	-.28		6.50	11.50
2	0	6	10.5		-.01	-.08	-.02	-.14		7.17	12.83
C 3	1	15	26.3	C	.47	.32	.64	.43	C	9.27	17.67
4	0	27	47.4		-.31	-.09	-.39	-.12		6.44	13.70
5	0	0	.0		.00	.00	.00	.00		.00	.00
6	0	1	1.8		-.07	-.05	-.20	-.15		6.00	12.00
TOTAL		57									

Counting Back 18-31

ADMINISTRATION TIME:
BASELINE

LERTAP 2.0 — SUMMARY ITEM STATISTICS —

TEST NO 1 ACHIEVEMENT MONITORING, INST. J — SUBTEST 2 FACTS SPEED - ADDITION

98

ITEM NUMBER 1

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	42	73.7	C	.77	.69	1.03	.93	C	5.45	16.90
2	0	3	5.3		-.32	-.35	-.67	-.73		.33	5.00
0	0	12	21.1		-.66	-.56	-.93	-.78		.58	7.58
TOTAL		57									

ITEM DESCRIPTIONS: 1 + 5

ITEM NUMBER 2

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	36	63.2	C	.64	.63	.81	.81	C	5.53	17.33
2	0	9	15.8		-.30	-.32	-.45	-.49		2.22	9.67
0	0	12	21.1		-.49	-.46	-.69	-.65		1.50	8.75
TOTAL		57									

3 + 2

ITEM NUMBER 3

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	40	70.2	C	.65	.62	.86	.82	C	5.35	16.85
2	0	7	12.3		-.46	-.44	-.74	-.71		.71	7.00
0	0	10	17.5		-.39	-.37	-.57	-.54		1.80	9.30
TOTAL		57									

4 + 4

ITEM NUMBER 4

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	20	35.1	C	.76	.70	.97	.90	C	7.05	20.25
2	0	9	15.8		-.35	-.31	-.53	-.47		1.89	9.78
0	0	28	49.1		-.47	-.44	-.58	-.55		2.82	11.54
TOTAL		57									

3 + 6

ITEM NUMBER 5

135 — 136

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	31	54.4	C	.83	.71	1.04	.89	C	6.29	18.39
2	0	11	19.3		-.44	-.34	-.63	-.49		1.64	10.00
0	0	15	26.3		-.54	-.50	-.73	-.68		1.60	9.07
TOTAL		57									

4 + 3

TEST NO 1 ACHIEVEMENT MONITORING, INST. J SUBTEST 2 FACTS SPEED - ADDITION

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	31	54.4	C	.80	.75	1.01	.94	C	6.23	18.61
2	0	10	17.5		-.50	-.46	-.74	-.67		1.10	8.10
0	0	16	28.1		-.47	-.44	-.62	-.59		2.06	9.87
TOTAL		57									

6 + 2

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	8	14.0	C	.53	.38	.83	.60	C	7.87	20.25
2	0	14	24.6		-.18	-.28	-.24	-.38		3.29	11.29
0	0	35	61.4		-.22	-.03	-.29	-.04		3.66	14.17
TOTAL		57									

5 + 8

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	9	15.8	C	.57	.46	.87	.70	C	7.89	21.00
2	0	12	21.1		-.20	-.27	-.28	-.38		3.08	11.08
0	0	36	63.2		-.27	-.12	-.34	-.16		3.58	13.72
TOTAL		57									

6 + 9

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	20	35.1	C	.64	.46	.82	.59	C	6.60	18.20
2	0	12	21.1		-.12	-.06	-.17	-.09		3.50	13.58
0	0	25	43.9		-.51	-.39	-.65	-.49		2.52	11.56
TOTAL		57									

9 + 3

ADMINISTRATION TIME:
BASELINE

LERTAP 2.0 — SUMMARY ITEM STATISTICS —

TEST NO 1 ACHIEVEMENT MONITORING, INST. J — SUBTEST 3 FACTS SPEED - SUBTRACTION

ITEM NUMBER 1

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	ITEM DESCRIPTIONS
C 1	1	44	77.2	C	.65	.53	.90	.74	C	3.66	16.14	5 - 1
2	0	10	17.5		-.58	-.47	-.85	-.70		.20	7.90	
0	0	3	5.3		-.24	-.20	-.51	-.42		.67	9.00	
TOTAL		57										

ITEM NUMBER 2

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	ITEM DESCRIPTIONS
C 1	1	32	56.1	C	.65	.55	.81	.69	C	4.12	17.34	9 - 2
2	0	16	28.1		-.40	-.30	-.54	-.40		1.50	11.31	
0	0	9	15.8		-.38	-.38	-.57	-.57		1.00	8.89	
TOTAL		57										

ITEM NUMBER 3

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	ITEM DESCRIPTIONS
C 1	1	17	29.8	C	.76	.67	1.00	.89	C	5.41	20.76	8 - 7
2	0	15	26.3		-.36	-.34	-.48	-.46		1.60	10.73	
0	0	25	43.9		-.38	-.32	-.48	-.40		1.96	12.08	
TOTAL		57										

ITEM NUMBER 4

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	ITEM DESCRIPTIONS
C 1	1	29	50.9	C	.75	.52	.94	.65	C	4.48	17.52	5 - 3
2	0	18	31.6		-.46	-.30	-.60	-.39		1.44	11.56	
0	0	10	17.5		-.43	-.32	-.63	-.47		.90	10.00	
TOTAL		57										

ITEM NUMBER 5

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	ITEM DESCRIPTIONS
C 1	1	20	35.1	C	.77	.70	.99	.90	C	5.15	20.25	7 - 6
2	0	14	24.6		-.52	-.38	-.71	-.52		.93	10.14	
0	0	23	40.4		-.29	-.34	-.37	-.44		2.13	11.70	
TOTAL		57										

TEST NO 1 ACHIEVEMENT MONITORING, INST. J SUBTEST 3 FACTS SPEED - SUBTRACTION

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	14	24.6	C	.59	.52	.81	.71	C	5.14	20.00	
2	0	17	29.8		-.47	-.36	-.61	-.47		1.35	10.88	8 - 5
0	0	26	45.6		-.09	-.12	-.11	-.15		2.69	13.50	
TOTAL		57										

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	3	5.3	C	.23	.18	.48	.37	C	5.00	19.00	
2	0	11	19.3		-.39	-.24	-.56	-.35		1.18	11.18	14 - 7
0	0	43	75.4		.24	.13	.32	.18		3.19	14.79	
TOTAL		57										

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	4	7.0	C	.40	.30	.75	.58	C	6.00	21.25	
2	0	13	22.8		-.30	-.22	-.42	-.31		1.69	11.77	12 - 5
0	0	40	70.2		.06	.03	.08	.04		2.97	14.45	
TOTAL		57										

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	2	3.5	C	.36	.33	.86	.77	C	7.00	25.00	
2	0	11	19.3		-.57	-.38	-.83	-.55		.36	9.45	11 - 8
0	0	44	77.2		.38	.21	.52	.30		3.34	15.05	
TOTAL		57										

101

ADMINISTRATION TIME:
BASELINE

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 2 ACHIEVEMENT MONITORING, INST. K SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 1

OPTION	WT	N	P	PB-ST	PB-TT	B-ST	B-TT		MEANS ST	MEANS TT
1	0	1	1.8	-.11	-.18	-.33	-.54		6.00	7.00
C 2	1	56	98.2	.11	.18	.22	.35	C	7.82	15.73
3	0	0	.0	.00	.00	.00	.00		.00	.00
4	0	0	.0	.00	.00	.00	.00		.00	.00
5	0	0	.0	.00	.00	.00	.00		.00	.00
0	0	0	.0	.00	.00	.00	.00		.00	.00
TOTAL		57								

ITEM DESCRIPTIONS

Numerousness 0-10

ITEM NUMBER 2

OPTION	WT	N	P	PB-ST	PB-TT	B-ST	B-TT		MEANS ST	MEANS TT
C 1	1	52	91.2	.34	.26	.57	.43	C	8.02	16.10
2	0	3	5.3	-.30	-.23	-.63	-.47		5.00	9.33
3	0	2	3.5	-.16	-.12	-.37	-.29		6.00	11.50
4	0	0	.0	.00	.00	.00	.00		.00	.00
5	0	0	.0	.00	.00	.00	.00		.00	.00
0	0	0	.0	.00	.00	.00	.00		.00	.00
TOTAL		57								

Numerousness 11-20

ITEM NUMBER 3

OPTION	WT	N	P	PB-ST	PB-TT	B-ST	B-TT		MEANS ST	MEANS TT
1	0	16	28.1	-.37	-.36	-.49	-.48		6.50	11.87
2	0	4	7.0	-.10	-.15	-.19	-.29		7.00	12.00
C 3	1	27	47.4	.59	.51	.74	.64	C	9.15	19.07
4	0	10	17.5	-.27	-.15	-.40	-.22		6.50	13.50
5	0	0	.0	.00	.00	.00	.00		.00	.00
0	0	0	.0	.00	.00	.00	.00		.00	.00
TOTAL		57								

Open Sentences
Addition 0-9

ITEM NUMBER 4

OPTION	WT	N	P	PB-ST	PB-TT	B-ST	B-TT		MEANS ST	MEANS TT
C 1	1	3	5.3	.10	-.08	.20	-.17	C	8.67	13.33
2	0	5	8.8	-.03	-.10	-.05	-.19		7.60	13.40
3	0	29	50.9	-.16	-.07	-.20	-.09		7.45	15.10
4	0	20	35.1	.14	.18	.18	.23		8.20	17.15
5	0	0	.0	.00	.00	.00	.00		.00	.00
0	0	0	.0	.00	.00	.00	.00		.00	.00
TOTAL		57								

Open Sentences
Subtraction 10-18

TEST NO 2 ACHIEVEMENT MONITORING, INST, K SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 5

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	20	35.1	C	.60	.46	.77	.59	C	9.55	19.60
2	0	18	31.6		-.42	-.53	-.55	-.70		6.44	10.50
3	0	7	12.3		-.16	.02	-.26	.04		6.86	16.00
4	0	12	21.1		-.09	.05	-.13	.08		7.42	16.25
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		57									

Problem Solving
Subt-Comparison 11-15

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	4	7.0		-.29	-.42	-.55	-.79		5.50	5.75
C 2	1	49	86.0	C	.54	.56	.82	.85	C	8.27	17.04
3	0	0	.0		.00	.00	.00	.00		.00	.00
4	0	4	7.0		-.45	-.34	-.85	-.65		4.25	7.50
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		57									

Problem Solving
Add-part part whole 5-9

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	9	15.8		-.36	-.29	-.54	-.44		6.00	11.22
C 2	1	48	84.2	C	.36	.29	.53	.43	C	8.13	16.40
3	0	0	.0		.00	.00	.00	.00		.00	.00
4	0	0	.0		.00	.00	.00	.00		.00	.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		57									

Ordering Sets
One-to-one correspondence

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	1	1.8		-.23	-.24	-.71	-.72		4.00	4.00
2	0	1	1.8		-.17	-.14	-.52	-.41		5.00	9.00
C 3	1	54	94.7	C	.41	.35	.75	.63	C	8.00	16.11
4	0	1	1.8		-.29	-.22	-.89	-.66		3.00	5.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		57									

Ordering Numbers 0-20

TEST NO 2 ACHIEVEMENT MONITORING, INST, K SUBTEST 1 OBJECTIVES TEST

104

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	6	10.5		.09	.15	.14	.26		8.33	18.50
2	0	14	24.6		.36	.13	.49	.18		9.14	17.07
C 3	1	11	19.3	C	.11	.16	.16	.23	C	8.27	17.73
4	0	25	43.9		-.40	-.32	-.51	-.41		6.80	13.20
5	0	1	1.8		-.17	-.05	-.52	-.16		5.00	13.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		57									

Sentence Writing (A)
Subt-comparison 5-9

ITEM NUMBER 10

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	13	22.8		.17	.10	.23	.14		8.46	16.77
C 2	1	9	15.8	C	.37	.24	.57	.37	C	9.67	19.22
3	0	14	24.6		-.11	-.23	-.16	-.31		7.36	13.00
4	0	21	36.8		-.33	-.07	-.42	-.09		6.86	15.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		57									

Sentence Writing (A)
Subt-simple separating 11-15

ITEM NUMBER 11

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	5	8.8		-.20	-.21	-.35	-.37		6.40	11.20
2	0	12	21.1		-.13	-.24	-.18	-.34		7.25	12.58
C 3	1	26	45.6	C	.43	.36	.54	.45	C	8.81	18.12
4	0	14	24.6		-.24	-.05	-.33	-.07		6.86	15.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		57									

Sentence Writing (B)
Add-simple joining 11-15

ITEM NUMBER 12

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	17	29.9		.01	-.15	.01	-.19		7.82	14.12
2	0	10	17.5		.02	.24	.03	.36		7.90	19.00
C 3	1	11	19.3	C	.15	-.06	.22	-.09	C	8.45	14.73
4	0	19	33.3		-.15	.00	-.20	.00		7.32	15.58
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		57									

Sentence Writing (B)
Subt-part part whole-addend
11-15

147

148

TEST NO 2 ACHIEVEMENT MONITORING, INST. K SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 13

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		MEANS ST	MEANS TT
C 1	1	34	59.6	C	.41	.24	.52	.31	C	9.53	16.88
2	0	10	17.5		-.06	.06	-.09	.09		7.50	16.40
3	0	8	14.0		-.36	-.33	-.55	-.52		5.87	10.25
4	0	5	8.8		-.20	-.09	-.35	-.17		6.40	13.60
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		57									

Counting On 9-18

ITEM NUMBER 14

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		MEANS ST	MEANS TT
1	0	14	24.6		-.21	-.35	-.28	-.47		7.00	11.64
C 2	1	17	29.8	C	.31	.41	.41	.55	C	8.82	19.71
3	0	17	29.8		-.06	-.11	-.08	-.14		7.59	14.53
4	0	9	15.8		-.07	.02	-.10	.03		7.44	15.89
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		57									

Counting Back 9-18

ITEM NUMBER 15

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		MEANS ST	MEANS TT
1	0	6	10.5		-.26	-.18	-.43	-.30		6.17	12.17
C 2	1	27	47.4	C	.51	.37	.64	.46	C	8.96	18.07
3	0	6	10.5		-.07	-.20	-.12	-.33		7.33	11.83
4	0	18	31.6		-.33	-.14	-.44	-.19		6.72	14.22
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		57									

Counting On 18-31

ADMINISTRATION TIME:
BASELINE

LERTAP 2.0 — SUMMARY ITEM STATISTICS — PAGE 45

TEST NO 2 ACHIEVEMENT MONITOPING, INST, K — SUBTEST 2 FACTS SPEED - ADDITION

106

ITEM NUMBER 1

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	ITEM DESCRIPTIONS
C 1	1	41	71.9	C	.76	.71	1.01	.95	C	6.07	18.46	
2	0	5	8.8		-.40	-.34	-.72	-.61		.80	8.40	3 + 1
0	0	11	19.3		-.57	-.56	-.82	-.81		1.18	8.09	
TOTAL		57										

ITEM NUMBER 2

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	32	56.1	C	.79	.70	1.00	.87	C	6.75	19.56	
2	0	8	14.0		-.38	-.33	-.59	-.52		1.88	10.25	2 + 5
0	0	17	29.8		-.57	-.50	-.75	-.66		2.06	10.59	
TOTAL		57										

ITEM NUMBER 3

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	41	71.9	C	.66	.55	.88	.73	C	5.90	17.80	
2	0	4	7.0		-.36	-.32	-.69	-.61		.75	8.00	1 + 6
0	0	12	21.1		-.51	-.40	-.71	-.57		1.75	10.50	
TOTAL		57										

ITEM NUMBER 4

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	38	66.7	C	.76	.72	.98	.93	C	6.26	18.87	
2	0	11	19.3		-.51	-.50	-.74	-.71		1.55	9.00	7 + 2
0	0	8	14.0		-.45	-.41	-.70	-.64		1.37	9.00	
TOTAL		57										

ITEM NUMBER 5

151

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	31	54.4	C	.75	.66	.94	.83	C	6.71	19.52	
2	0	7	12.3		-.30	-.31	-.48	-.51		2.29	10.14	2 + 6
0	0	19	33.3		-.58	-.48	-.76	-.63		2.21	11.16	
TOTAL		57										

152

TEST NO 2 ACHIEVEMENT MONITORING, INST, K SUBTEST 2 FACTS SPEED - ADDITION

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	24	42.1	C	.63	.60	.80	.75	C	6.88	20.12	
2	0	7	12.3		-.17	-.17	-.28	-.28		3.29	12.57	3 + 5
0	0	26	45.6		-.51	-.48	-.64	-.60		3.00	12.19	
TOTAL		57										

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	12	21.1	C	.54	.49	.76	.68	C	7.75	21.58	
2	0	9	15.8		-.06	-.03	-.10	-.05		4.22	15.11	4 + 8
0	0	36	63.2		-.40	-.38	-.52	-.49		3.75	13.69	
TOTAL		57										

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	32	56.1	C	.78	.68	.98	.86	C	6.72	19.50	
2	0	5	8.8		-.36	-.36	-.64	-.64		1.20	8.00	3 + 7
0	0	20	35.1		-.60	-.50	-.77	-.64		2.25	11.20	
TOTAL		57										

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	15	26.3	C	.67	.59	.90	.80	C	8.00	22.00	
2	0	13	22.8		-.23	-.35	-.33	-.49		3.38	11.38	5 + 9
0	0	29	50.9		-.39	-.23	-.49	-.28		3.52	14.14	
TOTAL		57										

ADMINISTRATION TIME:
BASELINE

LERTAP 2.0 — SUMMARY ITEM STATISTICS — PAGE 48

TEST NO 2 ACHIEVEMENT MONITORING, INST. K — SUBTEST 3 FACTS SPEED - SUBTRACTION

108

ITEM NUMBER 1

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	ITEM DESCRIPTIONS
C 1	1	42	73.7	C	.63	.63	.85	.85	C	4.02	18.02	
2	0	8	14.0		-.38	-.34	-.59	-.53		.88	10.12	7 - 1
0	0	7	12.3		-.44	-.49	-.72	-.79		.29	7.14	
TOTAL		57										

ITEM NUMBER 2

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	29	50.9	C	.70	.53	.87	.66	C	4.76	18.93	
2	0	11	19.3		-.30	-.28	-.44	-.41		1.64	11.82	8 - 4
0	0	17	29.8		-.50	-.33	-.66	-.44		1.29	12.29	
TOTAL		57										

ITEM NUMBER 3

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	18	31.6	C	.69	.63	.90	.82	C	5.56	21.56	
2	0	17	29.8		-.51	-.47	-.68	-.62		1.24	10.94	9 - 5
0	0	22	38.6		-.18	-.16	-.22	-.20		2.59	14.27	
TOTAL		57										

ITEM NUMBER 4

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	16	28.1	C	.74	.64	.98	.86	C	5.94	22.25	
2	0	15	26.3		-.33	-.32	-.45	-.43		1.80	12.13	7 - 4
0	0	26	45.6		-.37	-.30	-.47	-.38		2.15	13.46	
TOTAL		57										

156

ITEM NUMBER 5 (155)

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	9	15.8	C	.68	.56	1.03	.85	C	6.89	24.00	
2	0	19	33.3		-.36	-.37	-.47	-.48		1.89	12.16	8 - 6
0	0	29	50.9		-.15	-.06	-.19	-.07		2.76	15.21	
TOTAL		57										

TEST NO 2 ACHIEVEMENT MONITORING, INST. K SUBTEST 3 FACTS SPEED - SUBTRACTION

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	29	50.9	C	.64	.51	.80	.64	C	4.62	18.83
2	0	19	33.3		-.49	-.37	-.63	-.48		1.47	12.16
0	0	9	15.8		-.24	-.22	-.37	-.33		1.78	12.33
TOTAL		57									

4 - 3

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	28	49.1	C	.76	.71	.95	.89	C	4.96	20.25
2	0	16	28.1		-.54	-.44	-.72	-.59		1.06	11.00
0	0	13	22.8		-.33	-.37	-.45	-.51		1.69	11.15
TOTAL		57									

11 - 2

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	2	3.5	C	.31	.28	.74	.66	C	7.00	25.00
2	0	17	29.8		-.24	-.25	-.32	-.33		2.24	13.06
0	0	38	66.7		.11	.14	.15	.18		3.32	16.21
TOTAL		57									

13 - 8

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	5	8.8	C	.40	.35	.71	.63	C	6.20	23.00
2	0	14	24.6		-.47	-.43	-.65	-.59		1.14	10.64
0	0	38	66.7		.19	.18	.25	.24		3.45	16.42
TOTAL		57									

12 - 7

ADMINISTRATION TIME:
BASELINE

CERTAP 2.0 — SUMMARY ITEM STATISTICS — PAGE 52

TEST NO 3 ACHIEVEMENT MONITORING, INST, L — SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 1

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	ITEM DESCRIPTIONS
C 1	1	55	96.5	C	.17	.16	.33	.31	C	7.62	15.36	
2	0	0	.0		.00	.00	.00	.00		.00	.00	
3	0	0	.0		.00	.00	.00	.00		.00	.00	
4	0	2	3.5		-.17	-.16	-.41	-.39		5.50	9.50	Numerousness 0-10
5	0	0	.0		.00	.00	.00	.00		.00	.00	
0	0	0	.0		.00	.00	.00	.00		.00	.00	
TOTAL		57										

ITEM NUMBER 2

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
1	0	0	.0		.00	.00	.00	.00		.00	.00	
C 2	1	52	91.2	C	.43	.40	.71	.67	C	7.85	15.98	
3	0	0	.0		.00	.00	.00	.00		.00	.00	
4	0	5	8.8		-.43	-.40	-.76	-.71		4.40	6.60	Numerousness 11-20
5	0	0	.0		.00	.00	.00	.00		.00	.00	
0	0	0	.0		.00	.00	.00	.00		.00	.00	
TOTAL		57										

ITEM NUMBER 3

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
1	0	4	7.0		-.10	-.13	-.18	-.25		6.75	12.00	
C 2	1	22	38.6	C	.65	.56	.83	.71	C	9.41	19.82	
3	0	5	8.8		-.24	-.20	-.42	-.36		5.80	10.80	Open Sentences Addition 10-18
4	0	25	43.9		-.41	-.31	-.52	-.40		6.48	12.80	
5	0	0	.0		.00	.00	.00	.00		.00	.00	
0	0	1	1.8		-.15	-.18	-.45	-.56		5.00	6.00	
TOTAL		57										

ITEM NUMBER 4

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	14	24.6	C	.45	.45	.62	.62	C	9.36	20.43	
2	0	2	3.5		.04	-.03	.09	-.08		8.00	14.00	
3	0	22	38.6		.19	.16	.24	.20		8.09	16.45	Open Sentences Subtraction 0-9
4	0	19	33.3		-.63	-.56	-.81	-.73		5.53	9.89	
5	0	0	.0		.00	.00	.00	.00		.00	.00	
0	0	0	.0		.00	.00	.00	.00		.00	.00	
TOTAL		57										

159

160

TEST NO 3 ACHIEVEMENT MONITORING, INST. L SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 5

	OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST MEAN	TT MEAN
	1	0	1	1.8		-.33	-.27	-.99	-.81		2.00	2.00
	2	0	8	14.0		-.07	-.23	-.12	-.36		7.12	11.37
C	3	1	39	68.4	C	.31	.43	.41	.56	C	8.03	17.08
	4	0	9	15.8		-.21	-.23	-.32	-.35		6.44	11.67
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		57									

Problem Solving
Add-part part whole 11-15

ITEM NUMBER 6

	OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST MEAN	TT MEAN
C	1	1	51	89.5	C	.33	.27	.53	.43	C	7.80	15.76
	2	0	1	1.8		-.09	-.00	-.27	-.01		6.00	15.00
	3	0	3	5.3		-.23	-.21	-.48	-.43		5.33	9.33
	4	0	2	3.5		-.21	-.19	-.51	-.46		5.00	8.50
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		57									

Problem Solving
Subt-simple separating 5-9

ITEM NUMBER 7

	OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST MEAN	TT MEAN
	1	0	0	.0		.00	.00	.00	.00		.00	.00
	2	0	0	.0		.00	.00	.00	.00		.00	.00
C	3	1	56	98.2	C	.33	.27	.65	.53	C	7.64	15.39
	4	0	1	1.8		-.33	-.27	-.99	-.81		2.00	2.00
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		57									

Ordering Sets
One-to-one correspondence

ITEM NUMBER 8

	OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST MEAN	TT MEAN
	1	0	15	26.3		-.28	-.16	-.38	-.22		6.47	13.33
C	2	1	34	59.6	C	.40	.27	.51	.35	C	8.29	16.65
	3	0	2	3.5		-.00	-.15	-.01	-.35		7.50	10.00
	4	0	6	10.5		-.23	-.11	-.39	-.19		6.00	13.00
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		57									

Ordering Numbers 0-20

111

TEST NO 3 ACHIEVEMENT MONITORING, INST. L SUBTEST 1 OBJECTIVES TEST

112

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	11	19.3		.12	.12	.17	.18		8.09	16.82
C 2	1	8	14.0	C	.10	-.10	.16	-.16	C	8.13	13.50
3	0	10	17.5		.17	.28	.26	.42		8.40	19.20
4	0	26	45.6		-.31	-.28	-.39	-.36		6.77	13.12
5	0	2	3.5		.04	.11	.09	.26		8.00	19.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		57									

Sentence Writing (A)
Subt- comparison 11-15

ITEM NUMBER 10

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	12	21.1		-.05	-.04	-.07	-.06		7.33	14.58
2	0	8	14.0		.04	-.05	.06	-.07		7.75	14.37
C 3	1	22	38.6	C	.35	.37	.44	.47	C	8.55	18.23
4	0	14	24.6		-.37	-.33	-.50	-.45		6.07	11.36
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	1	1.8		-.03	-.02	-.10	-.07		7.00	14.00
TOTAL		57									

Sentence Writing (A)
Add-part part whole 5-9

ITEM NUMBER 11

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	8	14.0		.35	.27	.54	.43		9.50	19.62
2	0	20	35.1		.07	.08	.09	.10		7.75	15.85
C 3	1	5	8.8	C	.03	-.06	.06	-.11	C	7.80	13.80
4	0	23	40.4		-.32	-.24	-.41	-.30		6.65	13.26
5	0	1	1.8		-.03	.02	-.10	.05		7.00	16.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		57									

Sentence Writing (B)
Subt-join-addend 11-15

ITEM NUMBER 12

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	11	19.3		.04	-.01	.06	-.02		7.73	15.00
C 2	1	8	14.0	C	.26	.14	.40	.22	C	9.00	17.50
3	0	4	7.0		.05	.08	.10	.15		8.00	17.00
4	0	33	57.9		-.23	-.14	-.29	-.17		7.09	14.39
5	0	1	1.8		-.03	.02	-.10	.05		7.00	16.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		57									

Sentence Writing (B)
Subt-part part whole-addend
0-99

163

164

TEST NO 3 ACHIEVEMENT MONITORING, INST, L SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 13

					COEFFICIENTS OF CORRELATION					MEANS	
OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT
1	0	9	15.8		-.10	-.03	-.16	-.05		7.00	14.67
2	0	12	21.1		-.01	-.06	-.01	-.09		7.50	14.33
C 3	1	20	35.1	C	.63	.51	.81	.66	C	9.50	19.75
4	0	15	26.3		-.58	-.46	-.78	-.62		5.33	10.07
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	1	1.8		-.03	-.02	-.10	-.07		7.00	14.00
TOTAL		57									

Counting Back 9-18

ITEM NUMBER 14

					COEFFICIENTS OF CORRELATION					MEANS	
OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT
C 1	1	22	38.6	C	.52	.45	.66	.57	C	9.05	18.91
2	0	6	10.5		-.11	-.01	-.18	-.01		6.83	15.00
3	0	11	19.3		.06	-.04	.08	-.06		7.82	14.64
4	0	18	31.6		-.53	-.43	-.69	-.57		5.78	10.94
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		57									

Counting On 18-31

ITEM NUMBER 15

					COEFFICIENTS OF CORRELATION					MEANS	
OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT
1	0	20	35.1		-.39	-.43	-.50	-.56		6.35	11.25
C 2	1	22	38.6	C	.55	.57	.70	.72	C	9.14	19.91
3	0	5	8.8		.06	.04	.11	.07		8.00	16.00
4	0	10	17.5		-.27	-.21	-.40	-.31		6.20	12.10
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		57									

Counting On 9-18

ADMINISTRATION TIME:
BASELINE

LERTAP 2.0 — SUMMARY ITEM STATISTICS — PAGE 57

TEST NO 3 ACHIEVEMENT MONITORING, INST. L — SUBTEST 2 FACTS SPEED - ADDITION

ITEM NUMBER 1

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	ITEM DESCRIPTIONS
C 1	1	28	49.1	C	.80	.63	1.01	.79	C	7.43	19.43	
2	0	11	19.3		-.42	-.27	-.60	-.38		2.18	11.55	2 + 4
0	0	18	31.6		-.51	-.46	-.67	-.60		2.50	10.72	
TOTAL		57										

ITEM NUMBER 2

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	26	45.6	C	.75	.63	.94	.79	C	7.42	19.69	
2	0	16	28.1		-.44	-.34	-.59	-.45		2.62	11.56	6 + 3
0	0	15	26.3		-.39	-.36	-.53	-.49		2.80	11.13	
TOTAL		57										

ITEM NUMBER 3

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	38	66.7	C	.71	.66	.93	.85	C	6.45	18.24	
2	0	6	10.5		-.35	-.35	-.59	-.58		1.67	8.50	5 + 2
0	0	13	22.8		-.55	-.49	-.76	-.68		1.69	9.23	
TOTAL		57										

ITEM NUMBER 4

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	32	56.1	C	.78	.71	.98	.89	C	7.03	19.31	
2	0	3	5.3		-.21	-.20	-.45	-.41		2.00	9.67	2 + 3
0	0	22	38.6		-.70	-.63	-.89	-.81		2.09	9.86	
TOTAL		57										

ITEM NUMBER 5

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	40	70.2	C	.76	.65	1.01	.86	C	6.42	17.97	
2	0	3	5.3		-.26	-.14	-.55	-.28		1.33	11.33	5 + 0
0	0	14	24.6		-.67	-.62	-.92	-.85		1.14	7.93	
TOTAL		57										

TEST NO 3 ACHIEVEMENT MONITORING, INST. L SUBTEST 2 FACTS SPEED - ADDITION

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	40	70.2	C	.83	.73	1.09	.96	C	6.55	18.30	
2	0	3	5.3		-.34	-.28	-.71	-.58		.33	7.33	1 + 3
0	0	14	24.6		-.70	-.63	-.96	-.86		1.00	7.86	
TOTAL		57										

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	35	61.4	C	.73	.67	.93	.86	C	6.69	18.69	
2	0	3	5.3		-.04	-.04	-.08	-.09		4.33	14.00	9 + 2
0	0	19	33.3		-.74	-.67	-.96	-.87		1.58	8.84	
TOTAL		57										

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	21	36.8	C	.57	.58	.72	.74	C	7.19	20.19	
2	0	17	29.8		-.26	-.26	-.35	-.35		3.59	12.47	6 + 6
0	0	19	33.3		-.32	-.34	-.42	-.44		3.42	12.00	
TOTAL		57										

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	17	29.8	C	.63	.58	.83	.77	C	7.88	21.06	
2	0	14	24.6		.04	-.03	.05	-.04		5.07	14.79	4 + 7
0	0	26	45.6		-.61	-.51	-.77	-.64		2.77	11.50	
TOTAL		57										

ADMINISTRATION TIME:
BASELINE

LERTAP 2.0 — SUMMARY ITEM STATISTICS —

TEST NO 3 ACHIEVEMENT MONITORING, INST. L — SUBTEST 3 FACTS SPEED - SUBTRACTION

ITEM NUMBER 1

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	ITEM DESCRIPTIONS
C 1	1	34	59.6	C	.62	.54	.78	.68	C	3.88	18.09	
2	0	13	22.8		-.45	-.30	-.62	-.41		.92	11.54	3 - 2
0	0	10	17.5		-.30	-.37	-.44	-.54		1.30	9.90	
TOTAL		57										

ITEM NUMBER 2

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	16	28.1	C	.74	.57	.98	.76	C	5.37	21.19	
2	0	20	35.1		-.41	-.33	-.53	-.43		1.50	12.15	6 - 4
0	0	21	36.8		-.28	-.20	-.35	-.26		1.95	13.43	
TOTAL		57										

ITEM NUMBER 3

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	30	52.6	C	.75	.65	.94	.81	C	4.33	19.23	
2	0	13	22.8		-.39	-.31	-.54	-.43		1.15	11.38	9 - 1
0	0	14	24.6		-.49	-.45	-.66	-.62		.86	9.93	
TOTAL		57										

ITEM NUMBER 4

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	17	29.8	C	.67	.56	.89	.74	C	5.06	20.88	
2	0	17	29.8		-.39	-.21	-.52	-.27		1.41	13.06	7 - 3
0	0	23	40.4		-.26	-.33	-.33	-.42		2.04	12.48	
TOTAL		57										

ITEM NUMBER 5

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	33	57.9	C	.67	.56	.85	.71	C	4.03	18.33	
2	0	11	19.3		-.49	-.36	-.70	-.52		.55	10.27	6 - 1
0	0	13	22.8		-.33	-.32	-.46	-.45		1.38	11.23	
TOTAL		57										

TEST NO 3 ACHIEVEMENT MONITORING, INST. L SUBTEST 3 FACTS SPEED - SUBTRACTION

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	14	24.6	C	.67	.60	.91	.82	C	5.36	22.07
2	0	17	29.8		-.31	-.30	-.40	-.40		1.71	12.12
0	0	26	45.6		-.29	-.24	-.37	-.30		2.04	13.42
TOTAL		57									

7 - 5

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	11	19.3	C	.49	.32	.71	.47	C	5.00	19.55
2	0	19	33.3		-.21	-.07	-.27	-.09		2.11	14.53
0	0	27	47.4		-.20	-.19	-.24	-.24		2.30	13.81
TOTAL		57									

10 - 4

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	1	1.8	C	.37	.30	1.14	.91	C	9.00	30.00
2	0	10	17.5		-.26	-.18	-.38	-.26		1.50	12.60
0	0	46	80.7		.13	.07	.18	.10		2.89	15.39
TOTAL		57									

13 - 9

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	1	1.8	C	.37	.30	1.14	.91	C	9.00	30.00
2	0	13	22.8		-.13	-.02	-.18	-.03		2.23	14.92
0	0	43	75.4		.01	-.07	.01	-.10		2.77	14.88
TOTAL		57									

14 - 8

ADMINISTRATION TIME: 51

LERTAP 2.0 — SUMMARY ITEM STATISTICS — PAGE 28

TEST NO 1 ACHIEVEMENT MONITORING, INST, J — SUBTEST 1 OBJECTIVES TEST

118

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ITEM NUMBER 1

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	54	98.2	C	.05	-.08	.11	-.16	C	9.85	18.28
2	0	0	.0		.00	.00	.00	.00		.00	.00
3	0	1	1.8		-.05	.08	-.16	.25		9.00	22.00
4	0	0	.0		.00	.00	.00	.00		.00	.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		55									

ITEM DESCRIPTIONS

Numerousness 0-10

ITEM NUMBER 2

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	0	.0		.00	.00	.00	.00		.00	.00
2	0	0	.0		.00	.00	.00	.00		.00	.00
C 3	1	55	100.0	C	.00	.00	.00	.00	C	9.84	18.35
4	0	0	.0		.00	.00	.00	.00		.00	.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		55									

Numerousness 11-20

ITEM NUMBER 3

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	24	43.6	C	.44	.42	.55	.52	C	10.92	21.21
2	0	13	23.6		-.08	-.08	-.11	-.11		9.54	17.46
3	0	7	12.7		-.02	-.06	-.03	-.09		9.71	17.43
4	0	11	20.0		-.44	-.38	-.63	-.54		7.91	13.73
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		55									

Open Sentences Addition 0-9

ITEM NUMBER 4

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	12	21.8		-.28	-.26	-.40	-.37		8.67	15.33
C 2	1	29	52.7	C	.57	.57	.71	.72	C	11.00	21.62
3	0	9	16.4		-.19	-.31	-.29	-.46		8.89	14.11
4	0	5	9.1		-.33	-.22	-.57	-.38		7.60	14.20
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		55									

Open Sentences Subtraction 0-9

175

170

TEST NO 1 ACHIEVEMENT MONITORING, INST, J SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 5

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	4	7.3		-.04	-.12	-.08	-.23		9.50	15.75
2	0	1	1.8		-.24	-.16	-.72	-.49		6.00	11.00
C 3	1	40	72.7	C	.24	.23	.31	.31	C	10.15	19.20
4	0	10	18.2		-.16	-.13	-.23	-.19		9.10	16.70
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		55									

Problem Solving
Subt-simple separating 11-15

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	5	9.1		-.03	-.08	-.06	-.14		9.60	16.80
C 2	1	28	50.9	C	.43	.45	.54	.57	C	10.75	21.04
3	0	16	29.1		-.28	-.33	-.38	-.44		8.87	15.19
4	0	6	10.9		-.24	-.16	-.40	-.27		8.33	15.50
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		55									

Problem Solving
Subt-comparison 5-9

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	1	1.8		-.24	-.16	-.72	-.49		6.00	11.00
C 2	1	52	94.5	C	.35	.24	.63	.43	C	10.02	18.69
3	0	0	.0		.00	.00	.00	.00		.00	.00
4	0	1	1.8		-.12	-.08	-.34	-.22		8.00	15.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	1	1.8		-.24	-.16	-.72	-.49		6.00	11.00
TOTAL		55									

Ordering Sets
One-to-one correspondence

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	53	96.4	C	.34	.20	.66	.39	C	9.98	18.58
2	0	1	1.8		-.30	-.25	-.91	-.76		5.00	7.00
3	0	1	1.8		-.18	-.03	-.53	-.09		7.00	17.00
4	0	0	.0		.00	.00	.00	.00		.00	.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		55									

Ordering Numbers 0-20

TEST NO 1 ACHIEVEMENT MONITORING, INST. J SUBTEST 1 OBJECTIVES TEST

120

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	2	3.6		-.12	-.11	-.28	-.25		8.50	15.00
2	0	4	7.3		-.11	-.00	-.20	-.01		9.00	18.25
C 3	1	45	81.8	C	.44	.30	.64	.43	C	10.29	19.20
4	0	4	7.3		-.46	-.36	-.87	-.68		6.25	10.50
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		55									

Sentence Writing (A)
Subt-simple separating 5-9

ITEM NUMBER 10

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	5	9.1		-.21	-.12	-.37	-.21		8.40	16.00
C 2	1	37	67.3	C	.61	.62	.79	.81	C	10.76	20.97
3	0	7	12.7		-.37	-.51	-.60	-.81		7.71	10.29
4	0	6	10.9		-.32	-.28	-.54	-.47		7.83	13.50
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		55									

Sentence Writing (A)
Add-part part whole 11-15

ITEM NUMBER 11

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	4	7.3		-.01	-.02	-.02	-.03		9.75	18.00
2	0	27	49.1		.27	.25	.34	.31		10.44	19.89
C 3	1	5	9.1	C	.20	.11	.35	.19	C	11.20	20.40
4	0	19	34.5		-.40	-.32	-.52	-.41		8.63	15.68
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		55									

Sentence Writing (B)
Subt-join-addend 11-15

ITEM NUMBER 12

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	5	9.1		.02	.08	.04	.13		10.00	19.80
C 2	1	33	60.0	C	.38	.22	.49	.28	C	10.52	19.45
3	0	4	7.3		-.01	-.11	-.02	-.20		9.75	16.00
4	0	12	21.8		-.49	-.31	-.68	-.44		7.83	14.75
5	0	1	1.8		.07	.19	.22	.58		11.00	27.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		55									

Sentence Writing (B)
Subt-unknown subtrahend 0-99

173

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TEST NO 1 ACHIEVEMENT MONITORING, INST. J SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 13

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	3	5.5		-.06	.03	-.11	.05		9.33	19.00
2	0	4	7.3		-.08	-.11	-.14	-.20		9.25	16.00
C 3	1	43	78.2	C	.32	.28	.45	.40	C	10.21	19.26
4	0	5	9.1		-.35	-.33	-.62	-.58		7.40	12.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		55									

Counting On 9-18

ITEM NUMBER 14

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	25	45.5	C	.40	.25	.51	.31	C	10.80	20.00
2	0	12	21.8		-.10	.06	-.14	.08		9.42	19.00
3	0	11	20.0		-.09	-.07	-.13	-.10		9.45	17.45
4	0	7	12.7		-.37	-.35	-.60	-.57		7.71	12.71
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		55									

Counting Back 9-18

ITEM NUMBER 15

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	7	12.7		-.32	-.24	-.52	-.38		8.00	14.57
2	0	6	10.9		.27	.44	.45	.74		11.50	26.00
C 3	1	18	32.7	C	.36	.18	.46	.23	C	10.94	19.89
4	0	24	43.6		-.29	-.29	-.36	-.36		9.12	16.37
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		55									

Counting Back 18-31

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ADMINISTRATION TIME: 51

LERTAP 2.0 — SUMMARY ITEM STATISTICS — PAGE 33

TEST NO 1 ACHIEVEMENT MONITORING, INST, J — SUBTEST 2 FACTS SPEED - ADDITION

122

ITEM NUMBER 1

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	42	76.4	C	.55	.51	.75	.70	C	5.24	20.07
2	0	5	9.1		-.31	-.28	-.54	-.49		1.80	13.00
0	0	8	14.5		-.41	-.39	-.63	-.60		1.75	12.62
TOTAL		55									

ITEM DESCRIPTIONS: 1 + 5

ITEM NUMBER 2

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	33	60.0	C	.71	.63	.89	.80	C	5.97	21.48
2	0	7	12.7		-.34	-.29	-.55	-.47		2.00	13.71
0	0	15	27.3		-.52	-.48	-.70	-.64		2.13	13.60
TOTAL		55									

ITEM DESCRIPTIONS: 3 + 2

ITEM NUMBER 3

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	42	76.4	C	.69	.66	.94	.90	C	5.45	20.57
2	0	4	7.3		-.38	-.41	-.72	-.77		.75	9.50
0	0	9	16.4		-.52	-.47	-.79	-.71		1.22	11.89
TOTAL		55									

ITEM DESCRIPTIONS: 4 + 4

ITEM NUMBER 4

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	22	40.0	C	.74	.71	.94	.90	C	6.86	23.59
2	0	7	12.7		-.16	-.13	-.26	-.21		3.29	16.29
0	0	26	47.3		-.62	-.61	-.78	-.76		2.65	14.46
TOTAL		55									

ITEM DESCRIPTIONS: 3 + 6

ITEM NUMBER 5

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	24	43.6	C	.73	.65	.92	.81	C	6.67	22.79
2	0	8	14.5		-.29	-.24	-.45	-.38		2.50	14.75
0	0	23	41.8		-.53	-.47	-.67	-.60		2.74	14.96
TOTAL		55									

ITEM DESCRIPTIONS: 4 + 3

183

184

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TEST NO 1 ACHIEVEMENT MONITORING, INST. J SUBTEST 2 FACTS SPEED = ADDITION

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	37	67.3	C	.63	.51	.81	.67	C	5.59	20.51
2	0	7	12.7		-.34	-.25	-.55	-.39		2.00	14.43
0	0	11	20.0		-.45	-.40	-.64	-.57		2.00	13.55
TOTAL		55									

6 + 2

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	7	12.7	C	.61	.52	.97	.83	C	8.71	26.57
2	0	5	9.1		-.17	-.14	-.29	-.25		3.00	15.60
0	0	43	78.2		-.38	-.32	-.52	-.44		3.88	17.33
TOTAL		55									

5 + 8

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	10	18.2	C	.70	.61	1.02	.89	C	8.40	26.20
2	0	1	1.8		-.17	-.19	-.52	-.56		1.00	10.00
0	0	44	80.0		-.61	-.53	-.87	-.74		3.69	16.75
TOTAL		55									

6 + 9

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	26	47.3	C	.66	.62	.83	.78	C	6.31	22.31
2	0	7	12.7		-.14	-.00	-.22	-.01		3.43	18.29
0	0	22	40.0		-.58	-.63	-.74	-.80		2.50	13.68
TOTAL		55									

9 + 3

ADMINISTRATION TIME: S1

LERTAP 2.0 — SUMMARY ITEM STATISTICS —

TEST NO 1 ACHIEVEMENT MONITORING, INST, J — SUBTEST 3 FACTS SPEED - SUBTRACTION

ITEM NUMBER 1

OPTION	WT	N	P	PB-ST	PB-TT	B-ST	B-TT		MEANS ST	MEANS TT
C 1	1	49	89,1 C	,58	,39	,92	,62	C	4,55	19,16
2	0	3	5,5	-,43	-,25	-,89	-,52		,00	12,00
0	0	3	5,5	-,36	-,28	-,74	-,57		,67	11,33
TOTAL		55								

ITEM DESCRIPTIONS: 5 - 1

ITEM NUMBER 2

OPTION	WT	N	P	PB-ST	PB-TT	B-ST	B-TT		MEANS ST	MEANS TT
C 1	1	39	70,9 C	,62	,54	,82	,72	C	5,00	20,46
2	0	7	12,7	-,21	-,17	-,33	-,26		2,86	16,71
0	0	9	16,4	-,58	-,52	-,87	-,78		1,11	11,22
TOTAL		55								

ITEM DESCRIPTIONS: 9 - 2

ITEM NUMBER 3

OPTION	WT	N	P	PB-ST	PB-TT	B-ST	B-TT		MEANS ST	MEANS TT
C 1	1	36	65,5 C	,72	,62	,92	,80	C	5,28	21,08
2	0	3	5,5	-,33	-,28	-,67	-,57		1,00	11,33
0	0	16	29,1	-,59	-,51	-,78	-,68		2,00	13,50
TOTAL		55								

ITEM DESCRIPTIONS: 8 - 7

ITEM NUMBER 4

OPTION	WT	N	P	PB-ST	PB-TT	B-ST	B-TT		MEANS ST	MEANS TT
C 1	1	33	60,0 C	,73	,60	,93	,76	C	5,45	21,33
2	0	7	12,7	-,35	-,28	-,56	-,45		2,00	13,86
0	0	15	27,3	-,54	-,45	-,73	-,61		2,07	13,87
TOTAL		55								

ITEM DESCRIPTIONS: 5 - 3

ITEM NUMBER 5

OPTION	WT	N	P	PB-ST	PB-TT	B-ST	B-TT		MEANS ST	MEANS TT
C 1	1	34	61,8 C	,75	,65	,96	,83	C	5,44	21,44
2	0	5	9,1	-,29	-,22	-,51	-,38		2,00	14,20
0	0	16	29,1	-,62	-,56	-,82	-,74		1,88	13,06
TOTAL		55								

ITEM DESCRIPTIONS: 7 - 6

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TEST NO 1 ACHIEVEMENT MONITORING, INST, J SUBTEST 3 FACTS SPEED - SUBTRACTION

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	16	29.1	C	.64	.53	.85	.70	C	6.37	23.37	
2	0	4	7.3		-.13	-.11	-.25	-.20		3.00	16.00	6 - 5
0	0	35	63.6		-.53	-.44	-.68	-.57		3.17	16.31	
TOTAL		55										

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	4	7.3	C	.51	.35	.96	.66	C	8.25	26.00	
2	0	4	7.3		-.16	-.17	-.31	-.31		2.75	14.75	14 - 7
0	0	47	85.5		-.25	-.14	-.38	-.21		3.85	18.00	
TOTAL		55										

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	9	16.4	C	.52	.42	.78	.63	C	6.78	24.11	
2	0	5	9.1		-.01	.16	-.02	.28		4.00	21.40	12 - 5
0	0	41	74.5		-.43	-.46	-.69	-.62		3.81	16.71	
TOTAL		55										

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	5	9.1	C	.49	.34	.65	.59	C	7.60	24.60	
2	0	11	20.0		-.10	-.01	-.14	-.02		3.64	18.18	11 - 6
0	0	39	70.9		-.22	-.20	-.29	-.27		3.77	17.86	
TOTAL		55										

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ADMINISTRATION TIME: 51

LERTAP 2.0 — SUMMARY ITEM STATISTICS — PAGE 40

TEST NO 2 ACHIEVEMENT MONITORING, INST, K — SUBTEST 1 OBJECTIVES TEST

126

ITEM NUMBER 1

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	1	1.7		-.04	-.09	-.12	-.27		8.00	13.00
C 2	1	56	96.6	C	.27	.29	.63	.55	C	8.93	17.79
3	0	0	.0		.00	.00	.00	.00		.00	.00
4	0	1	1.7		-.34	-.31	-1.05	-.95		2.00	2.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		58									

ITEM DESCRIPTIONS

Numerousness 0-10

ITEM NUMBER 2

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	50	86.2	C	.26	.10	.39	.16	C	9.06	17.70
2	0	0	.0		.00	.00	.00	.00		.00	.00
3	0	7	12.1		-.17	-.00	-.28	-.00		7.57	17.43
4	0	0	.0		.00	.00	.00	.00		.00	.00
5	0	1	1.7		-.24	-.27	-.74	-.83		4.00	4.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		58									

Numerousness 11-20

ITEM NUMBER 3

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	4	6.9		-.08	-.15	-.16	-.29		8.00	13.75
2	0	3	5.2		-.07	-.24	-.15	-.50		8.00	10.67
C 3	1	44	75.9	C	.53	.60	.72	.82	C	9.57	19.66
4	0	7	12.1		-.58	-.51	-.94	-.82		4.71	8.43
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		58									

Open Sentences
Addition 0-9

ITEM NUMBER 4

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	9	15.5	C	.51	.30	.77	.45	C	11.89	22.00
2	0	3	5.2		-.01	-.03	-.02	-.06		8.67	16.67
3	0	13	22.4		-.07	-.13	-.10	-.18		8.46	15.85
4	0	32	55.2		-.30	-.07	-.37	-.09		8.09	17.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	1	1.7		-.04	-.09	-.12	-.27		8.00	13.00
TOTAL		58									

Open Sentences
Subtraction 10-18

191

192

TEST NO 2 ACHIEVEMENT MONITORING, INST, K SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 5

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	17	29,3	C	,46	,36	,60	,48	C	10,65	21,12
2	0	20	34,5		-,40	-,30	-,52	-,39		7,35	14,70
3	0	9	15,5		,16	,15	,25	,23		9,78	19,78
4	0	12	20,7		-,19	-,19	-,27	-,27		7,83	15,00
5	0	0	,0		,00	,00	,00	,00		,00	,00
0	0	0	,0		,00	,00	,00	,00		,00	,00
TOTAL		58									

Problem Solving
Subt-comparison 11-15

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	1	1,7		-,14	-,15	-,43	-,46		6,00	10,00
C 2	1	55	94,8	C	,28	,17	,51	,31	C	8,96	17,69
3	0	0	,0		,00	,00	,00	,00		,00	,00
4	0	2	3,4		-,24	-,10	-,57	-,24		5,50	14,00
5	0	0	,0		,00	,00	,00	,00		,00	,00
0	0	0	,0		,00	,00	,00	,00		,00	,00
TOTAL		58									

Problem Solving
Add-part part whole 5-9

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	2	3,4		-,13	-,14	-,31	-,34		7,00	12,50
C 2	1	54	93,1	C	,34	,38	,60	,66	C	9,04	18,11
3	0	2	3,4		-,35	-,39	-,83	-,92		4,00	4,00
4	0	0	,0		,00	,00	,00	,00		,00	,00
5	0	0	,0		,00	,00	,00	,00		,00	,00
0	0	0	,0		,00	,00	,00	,00		,00	,00
TOTAL		58									

Ordering Sets
One-to-one correspondence

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	0	,0		,00	,00	,00	,00		,00	,00
2	0	0	,0		,00	,00	,00	,00		,00	,00
C 3	1	56	96,6	C	,31	,21	,60	,41	C	8,95	17,70
4	0	2	3,4		-,31	-,21	-,74	-,51		4,50	10,00
5	0	0	,0		,00	,00	,00	,00		,00	,00
0	0	0	,0		,00	,00	,00	,00		,00	,00
TOTAL		58									

Ordering Numbers 0-20

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ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	4	6,9		,28	,14	,54	,26		11,50	20,75
2	0	19	32,8		,17	,27	,22	,35		9,42	19,95
C 3	1	8	13,8	C	,47	,29	,74	,45	C	11,87	22,12
4	0	27	46,6		-,63	-,52	-,79	-,65		7,04	13,78
5	0	0	,0		,00	,00	,00	,00		,00	,00
0	0	0	,0		,00	,00	,00	,00		,00	,00
TOTAL		58									

Sentence Writing (A)
Subt-comparison 5-9

ITEM NUMBER 10

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	5	8,6		-,21	-,11	-,38	-,20		7,00	15,00
C 2	1	37	63,8	C	,63	,39	,80	,50	C	10,03	19,35
3	0	1	1,7		-,14	-,11	-,43	-,33		6,00	12,00
4	0	15	25,9		-,51	-,32	-,69	-,43		6,53	13,87
5	0	0	,0		,00	,00	,00	,00		,00	,00
0	0	0	,0		,00	,00	,00	,00		,00	,00
TOTAL		58									

Sentence Writing (A)
Subt-simple separating 11-15

ITEM NUMBER 11

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	3	5,2		-,10	,03	-,21	,07		7,67	18,33
2	0	3	5,2		-,13	-,09	-,27	-,18		7,33	15,00
C 3	1	44	75,9	C	,51	,40	,70	,55	C	9,55	18,93
4	0	8	13,8		-,49	-,47	-,76	-,73		5,63	9,75
5	0	0	,0		,00	,00	,00	,00		,00	,00
0	0	0	,0		,00	,00	,00	,00		,00	,00
TOTAL		58									

Sentence Writing (B)
Add-simple joining 11-15

ITEM NUMBER 12

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	16	27,6		,14	,01	,18	,01		9,38	17,50
2	0	3	5,2		-,07	-,05	-,15	-,11		8,00	16,00
C 3	1	14	24,1	C	,49	,35	,68	,48	C	11,07	21,50
4	0	25	43,1		-,52	-,28	-,65	-,36		7,24	15,28
5	0	0	,0		,00	,00	,00	,00		,00	,00
0	0	0	,0		,00	,00	,00	,00		,00	,00
TOTAL		58									

Sentence Writing (B)
Subt-part part whole-addend
11-15

TEST NO 2 ACHIEVEMENT MONITORING, INST. K SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 13

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	27	46.6	C	.66	.63	.82	.79	C	10.63	21.89
2	0	8	13.8		-.37	-.37	-.58	-.58		6.37	11.37
3	0	19	32.8		-.32	-.33	-.42	-.42		7.58	14.37
4	0	4	6.9		-.19	-.14	-.36	-.27		7.00	14.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		58									

Counting On 9-18

ITEM NUMBER 14

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	12	20.7		.09	.12	.13	.17		9.25	19.00
C 2	1	8	13.8	C	.41	.35	.65	.55	C	11.50	23.25
3	0	13	22.4		.03	-.04	.04	-.06		8.92	16.92
4	0	24	41.4		-.36	-.31	-.46	-.39		7.67	15.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	1	1.7		-.09	-.01	-.28	-.03		7.00	17.00
TOTAL		58									

Counting Back 9-18

ITEM NUMBER 15

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	5	8.6		.07	.06	.13	.11		9.40	18.80
C 2	1	31	53.4	C	.57	.65	.72	.82	C	10.19	21.42
3	0	4	6.9		-.16	-.24	-.31	-.45		7.25	11.75
4	0	18	31.0		-.57	-.61	-.75	-.80		6.56	11.44
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		58									

Counting On 18-31

ADMINISTRATION TIME: 51

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 2 ACHIEVEMENT MONITORING, INST, K SUBTEST 2 FACTS SPEED - ADDITION

130

ITEM NUMBER 1

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT
C 1	1	45	77,6	C	,72	,65	1,00	,90	C	6,24	19,73
2	0	6	10,3		-,42	-,31	-,71	-,52		1,17	11,50
0	0	7	12,1		-,53	-,55	-,86	-,89		,57	7,71
TOTAL		58									

COEFFICIENTS OF CORRELATION — MEANS — ITEM DESCRIPTIONS: 3 + 1

ITEM NUMBER 2

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT
C 1	1	36	62,1	C	,80	,71	1,03	,91	C	7,00	21,08
2	0	5	8,6		-,30	-,23	-,53	-,40		2,00	12,60
0	0	17	29,3		-,67	-,62	-,89	-,82		1,76	11,12
TOTAL		58									

COEFFICIENTS OF CORRELATION — MEANS — 2 + 5

ITEM NUMBER 3

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT
C 1	1	41	70,7	C	,77	,79	1,02	1,04	C	6,59	20,76
2	0	3	5,2		-,25	-,28	-,53	-,58		1,67	9,67
0	0	14	24,1		-,69	-,69	-,95	-,95		1,21	9,36
TOTAL		58									

COEFFICIENTS OF CORRELATION — MEANS — 1 + 6

ITEM NUMBER 4

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT
C 1	1	42	72,4	C	,70	,68	,93	,91	C	6,38	20,19
2	0	2	3,4		-,21	-,13	-,51	-,30		1,50	13,00
0	0	14	24,1		-,64	-,66	-,88	-,90		1,50	9,79
TOTAL		58									

COEFFICIENTS OF CORRELATION — MEANS — 7 + 2

ITEM NUMBER 5

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT
C 1	1	35	60,3	C	,79	,71	1,00	,90	C	7,03	21,20
2	0	6	10,3		-,35	-,25	-,59	-,43		1,83	12,50
0	0	17	29,3		-,61	-,59	-,81	-,78		2,06	11,41
TOTAL		58									

COEFFICIENTS OF CORRELATION — MEANS — 2 + 6

193

200

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TEST NO 2 ACHIEVEMENT MONITORING, INST, K SUBTEST 2 FACTS SPEED - ADDITION

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	29	50,0	C	,77	,61	,97	,77	C	7,45	21,45	
2	0	5	8,6		-,26	-,25	-,46	-,45		2,40	12,00	
0	0	24	41,4		-,64	-,48	-,81	-,60		2,67	13,71	3 + 5
TOTAL		58										

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	19	32,8	C	,71	,47	,92	,61	C	6,21	21,84	
2	0	9	15,5		-,22	-,06	-,33	-,10		3,44	16,44	
0	0	30	51,7		-,51	-,39	-,64	-,49		3,50	14,93	4 + 8
TOTAL		58										

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	27	46,6	C	,65	,45	,82	,57	C	7,22	20,63	
2	0	9	15,5		-,10	,04	-,15	,07		4,33	18,11	
0	0	22	37,9		-,60	-,50	-,77	-,64		2,64	13,23	3 + 7
TOTAL		58										

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	18	31,0	C	,73	,52	,96	,68	C	8,44	22,50	
2	0	7	12,1		-,14	-,21	-,23	-,34		3,86	13,71	
0	0	33	56,9		-,59	-,38	-,75	-,44		3,42	15,45	5 + 9
TOTAL		58										

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ADMINISTRATION TIME: S1

LERTAP 2.0 — SUMMARY ITEM STATISTICS —

TEST NO 2 ACHIEVEMENT MONITORING, INST, K — SUBTEST 3 FACTS SPEED - SUBTRACTION

ITEM NUMBER 1

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		MEANS ST	MEANS TT	ITEM DESCRIPTIONS
C 1	1	48	82.8	C	.62	.63	.91	.91	C	4.21	19.31	
2	0	3	5.2		-.29	-.28	-.60	-.58		1.00	9.67	7 - 1
0	0	7	12.1		-.53	-.54	-.86	-.87		.57	7.86	
TOTAL		58										

ITEM NUMBER 2

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		MEANS ST	MEANS TT	ITEM DESCRIPTIONS
C 1	1	30	51.7	C	.62	.55	.77	.68	C	4.87	20.90	
2	0	5	8.6		-.09	-.10	-.16	-.19		3.00	15.20	8 - 4
0	0	23	39.7		-.58	-.50	-.73	-.63		2.09	13.39	
TOTAL		58										

ITEM NUMBER 3

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		MEANS ST	MEANS TT	ITEM DESCRIPTIONS
C 1	1	22	37.9	C	.61	.52	.78	.66	C	5.27	21.82	
2	0	7	12.1		-.25	-.26	-.41	-.42		2.14	12.86	9 - 5
0	0	29	50.0		-.43	-.34	-.54	-.42		2.69	15.21	
TOTAL		58										

ITEM NUMBER 4

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		MEANS ST	MEANS TT	ITEM DESCRIPTIONS
C 1	1	23	39.7	C	.57	.42	.72	.54	C	5.09	20.87	
2	0	6	10.3		-.12	.00	-.21	.01		2.83	17.50	7 - 4
0	0	29	50.0		-.48	-.42	-.60	-.52		2.59	14.69	
TOTAL		58										

ITEM NUMBER 5

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		MEANS ST	MEANS TT	ITEM DESCRIPTIONS
C 1	1	16	27.6	C	.57	.48	.76	.64	C	5.56	22.50	
2	0	12	20.7		.10	.14	.14	.20		4.00	19.25	8 - 6
0	0	30	51.7		-.59	-.54	-.73	-.68		2.40	14.00	
TOTAL		58										

TEST NO 2 ACHIEVEMENT MONITORING, INST, K SUBTEST 3 FACTS SPEED - SUBTRACTION

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	36	62,1	C	,67	,53	,86	,67	C	4,72	20,14
2	0	7	12,1		-,30	-,26	-,49	-,42		1,86	12,86
0	0	15	25,9		-,52	-,39	-,70	-,53		1,73	13,07
TOTAL		58									

4 - 3

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	28	48,3	C	,54	,53	,67	,67	C	4,79	21,07
2	0	12	20,7		-,00	,01	-,01	,02		3,58	17,58
0	0	18	31,0		-,58	-,59	-,76	-,77		1,78	11,67
TOTAL		58									

11 - 2

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	0	,0	C	,00	,00	,00	,00	C	,00	,00
2	0	15	25,9		,31	,33	,43	,45		4,73	21,13
0	0	43	74,1		-,31	-,33	-,42	-,45		3,21	16,14
TOTAL		58									

13 - 8

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	6	10,3	C	,52	,32	,87	,55	C	6,83	23,67
2	0	9	15,5		-,01	,01	-,01	,01		3,56	17,56
0	0	43	74,1		-,35	-,23	-,47	-,31		3,16	16,53
TOTAL		58									

12 - 7

ADMINISTRATION TIME: S1

LERTAP 2.0 — SUMMARY ITEM STATISTICS — PAGE 52

TEST NO 3 ACHIEVEMENT MONITORING, INST, L — SUBTEST 1 OBJECTIVES TEST

134

ITEM NUMBER 1

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	52	94.5	C	.38	.27	.68	.49	C	8.90	19.15
2	0	0	.0		.00	.00	.00	.00		.00	.00
3	0	2	3.6		-.28	-.19	-.66	-.46		5.00	11.50
4	0	1	1.8		-.25	-.18	-.75	-.55		4.00	9.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		55									

ITEM DESCRIPTIONS

Numerousness 0-10

ITEM NUMBER 2

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	0	.0		.00	.00	.00	.00		.00	.00
C 2	1	48	87.3	C	.36	.34	.55	.53	C	9.02	19.62
3	0	5	9.1		-.28	-.22	-.50	-.39		6.40	13.60
4	0	2	3.6		-.20	-.26	-.48	-.62		6.00	9.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		55									

Numerousness 11-20

ITEM NUMBER 3

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	10	18.2		-.22	-.22	-.32	-.33		7.50	15.30
C 2	1	34	61.8	C	.66	.65	.84	.83	C	10.00	22.35
3	0	2	3.6		.06	-.14	.15	-.33		9.50	13.50
4	0	9	16.4		-.68	-.55	-1.01	-.82		4.78	9.78
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		55									

Open Sentences Addition 10-18

ITEM NUMBER 4

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	32	58.2	C	.76	.74	.96	.94	C	10.31	23.22
2	0	3	5.5		-.19	-.22	-.39	-.46		6.67	12.00
3	0	7	12.7		-.23	-.14	-.37	-.23		7.14	16.00
4	0	13	23.6		-.60	-.63	-.83	-.87		5.92	10.54
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		55									

Open Sentences Subtraction 0-9

207

208

TEST NO 3 ACHIEVEMENT MONITORING, INST, L SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 5

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
1	0	0	,0		,00	,00	,00	,00		,00	,00	
2	0	2	3,6		-,05	-,03	-,12	-,08		8,00	17,50	
C 3	1	46	83,6	C	,52	,39	,77	,57	C	9,26	19,91	Problem Solving
4	0	7	12,7		-,55	-,41	-,88	-,65		5,00	11,00	Add-part part whole 11-15
5	0	0	,0		,00	,00	,00	,00		,00	,00	
0	0	0	,0		,00	,00	,00	,00		,00	,00	
TOTAL		55										

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	49	89,1	C	,44	,34	,69	,55	C	9,06	19,55	
2	0	1	1,8		-,30	-,13	-,91	-,38		3,00	12,00	
3	0	1	1,8		-,25	-,28	-,75	-,83		4,00	4,00	Problem Solving
4	0	4	7,3		-,24	-,20	-,45	-,38		6,50	13,50	Subt-simple separating 5-9
5	0	0	,0		,00	,00	,00	,00		,00	,00	
0	0	0	,0		,00	,00	,00	,00		,00	,00	
TOTAL		55										

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
1	0	0	,0		,00	,00	,00	,00		,00	,00	
2	0	0	,0		,00	,00	,00	,00		,00	,00	
C 3	1	55	100,0	C	,00	,00	,00	,00	C	8,67	18,69	Ordering Sets
4	0	0	,0		,00	,00	,00	,00		,00	,00	One-to-one correspondence
5	0	0	,0		,00	,00	,00	,00		,00	,00	
0	0	0	,0		,00	,00	,00	,00		,00	,00	
TOTAL		55										

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
1	0	3	5,5		-,16	-,12	-,32	-,25		7,00	15,00	
C 2	1	45	81,8	C	,59	,40	,84	,58	C	9,38	20,04	
3	0	3	5,5		-,19	-,12	-,39	-,25		6,67	15,00	Ordering Numbers 0-20
4	0	4	7,3		-,57	-,38	-1,07	-,71		3,50	9,00	
5	0	0	,0		,00	,00	,00	,00		,00	,00	
0	0	0	,0		,00	,00	,00	,00		,00	,00	
TOTAL		55										

TEST NO 3 ACHIEVEMENT MONITORING, INST, L SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	26	47,3		,14	,05	,17	,06		9,04	19,04
C 2	1	5	9,1	C	,24	,15	,42	,27	C	10,60	22,20
3	0	6	10,9		,11	,08	,19	,13		9,50	20,33
4	0	17	30,9		-,33	-,15	-,43	-,20		7,41	17,06
5	0	1	1,8		-,14	-,16	-,43	-,49		6,00	10,00
0	0	0	,0		,00	,00	,00	,00		,00	,00
TOTAL		55									

Sentence Writing (A)
Subt- comparison11-15

ITEM NUMBER 10

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	2	3,6		-,13	-,13	-,30	-,30		7,00	14,00
2	0	6	10,9		-,16	-,25	-,27	-,41		7,50	13,67
C 3	1	40	72,7	C	,47	,42	,62	,57	C	9,40	20,55
4	0	7	12,7		-,40	-,26	-,64	-,42		6,00	13,71
5	0	0	,0		,00	,00	,00	,00		,00	,00
0	0	0	,0		,00	,00	,00	,00		,00	,00
TOTAL		55									

Sentence Writing (A)
Add-part part whole 5-9

ITEM NUMBER 11

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	1	1,8		-,09	-,20	-,27	-,61		7,00	8,00
2	0	37	67,3		,34	,33	,44	,42		9,27	20,32
C 3	1	1	1,8	C	-,04	-,18	-,11	-,55	C	8,00	9,00
4	0	16	29,1		-,31	-,22	-,41	-,30		7,44	16,19
5	0	0	,0		,00	,00	,00	,00		,00	,00
0	0	0	,0		,00	,00	,00	,00		,00	,00
TOTAL		55									

Sentence Writing (B)
Subt-join-addend 11-15

ITEM NUMBER 12

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	26	47,3		,18	,13	,22	,16		9,15	19,65
C 2	1	9	16,4	C	,15	,14	,23	,20	C	9,56	20,89
3	0	2	3,6		-,01	-,15	-,03	-,36		8,50	13,00
4	0	18	32,7		-,31	-,18	-,40	-,23		7,56	16,83
5	0	0	,0		,00	,00	,00	,00		,00	,00
0	0	0	,0		,00	,00	,00	,00		,00	,00
TOTAL		55									

Sentence Writing (B)
Subt-part part whole-addend
0-99

TEST NO 3 ACHIEVEMENT MONITORING, INST. L SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 13

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	10	18.2		.08	.15	.12	.22		9.10	21.00
2	0	7	12.7		-.16	-.06	-.26	-.10		7.57	17.57
C 3	1	20	36.4	C	.45	.35	.58	.45	C	10.20	22.00
4	0	17	30.9		-.38	-.38	-.49	-.50		7.24	14.59
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	1	1.8		-.14	-.22	-.43	-.66		6.00	7.00
TOTAL		55									

Counting Back 9-18

ITEM NUMBER 14

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	16	29.1	C	.55	.57	.73	.76	C	10.87	25.12
2	0	17	30.9		-.04	-.08	-.05	-.11		8.53	17.82
3	0	7	12.7		.03	.02	.04	.04		8.86	19.14
4	0	14	25.5		-.51	-.46	-.70	-.63		6.43	13.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	1	1.8		-.14	-.22	-.43	-.66		6.00	7.00
TOTAL		55									

Counting On 18-31

ITEM NUMBER 15

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	10	18.2		.01	.02	.01	.03		8.70	19.00
C 2	1	25	45.5	C	.60	.52	.76	.66	C	10.36	22.80
3	0	6	10.9		-.09	-.05	-.15	-.08		8.00	17.67
4	0	13	23.6		-.60	-.52	-.83	-.72		5.92	11.92
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	1	1.8		-.14	-.22	-.43	-.66		6.00	7.00
TOTAL		55									

Counting On 9-18

ADMINISTRATION TIME: 51

LERTAP 2.0 — SUMMARY ITEM STATISTICS — PAGE 57

TEST NO 3 ACHIEVEMENT MONITORING, INST. L — SUBTEST 2 FACTS SPEED - ADDITION

138

ITEM NUMBER 1

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT
C 1	1	30	54,5	C	,77	,73	,97	,92	C	7,83	23,50
2	0	11	20,0		-,37	-,32	-,53	-,46		3,55	14,09
0	0	14	25,5		-,54	-,55	-,73	-,74		3,00	12,00
TOTAL		55									

COEFFICIENTS OF CORRELATION — MEANS — ITEM DESCRIPTIONS: 2 + 4

ITEM NUMBER 2

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT
C 1	1	34	61,8	C	,84	,75	1,07	,96	C	7,71	22,94
2	0	8	14,5		-,52	-,43	-,80	-,66		2,00	11,25
0	0	13	23,6		-,53	-,51	-,73	-,70		2,92	12,15
TOTAL		55									

COEFFICIENTS OF CORRELATION — MEANS — ITEM DESCRIPTIONS: 6 + 3

ITEM NUMBER 3

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT
C 1	1	40	72,7	C	,77	,77	1,03	1,03	C	7,15	22,07
2	0	8	14,5		-,43	-,47	-,67	-,73		2,62	10,50
0	0	7	12,7		-,57	-,53	-,92	-,85		1,29	8,71
TOTAL		55									

COEFFICIENTS OF CORRELATION — MEANS — ITEM DESCRIPTIONS: 5 + 2

ITEM NUMBER 4

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT
C 1	1	37	67,3	C	,77	,69	1,00	,89	C	7,35	22,14
2	0	5	9,1		-,42	-,35	-,74	-,61		1,80	10,80
0	0	13	23,6		-,57	-,52	-,79	-,72		2,69	11,92
TOTAL		55									

COEFFICIENTS OF CORRELATION — MEANS — ITEM DESCRIPTIONS: 2 + 3

ITEM NUMBER 5

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT
C 1	1	45	81,8	C	,58	,55	,83	,79	C	6,56	20,56
2	0	7	12,7		-,39	-,32	-,62	-,51		2,71	12,71
0	0	3	5,5		-,41	-,47	-,84	-,97		,67	4,67
TOTAL		55									

COEFFICIENTS OF CORRELATION — MEANS — ITEM DESCRIPTIONS: 5 + 0

215

215

TEST NO 3 ACHIEVEMENT MONITORING, INST, L SUBTEST 2 FACTS SPEED - ADDITION

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	41	74,5	C	,67	,60	,90	,82	C	6,90	21,22	
2	0	4	7,3		-,26	-,25	-,49	-,47		3,00	12,25	1 + 3
0	0	10	18,2		-,58	-,51	-,84	-,75		2,10	10,90	
TOTAL		55										

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	39	70,9	C	,81	,70	1,07	,93	C	7,28	21,92	
2	0	8	14,5		-,59	-,45	-,91	-,69		1,50	10,87	9 + 2
0	0	8	14,5		-,45	-,46	-,69	-,71		2,50	10,75	
TOTAL		55										

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	29	52,7	C	,60	,49	,76	,62	C	7,45	22,03	
2	0	11	20,0		-,32	-,17	-,46	-,24		3,82	16,27	6 + 6
0	0	15	27,3		-,39	-,40	-,52	-,54		3,87	14,00	
TOTAL		55										

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	21	38,2	C	,61	,52	,78	,67	C	8,05	23,48	
2	0	9	16,4		-,34	-,30	-,51	-,44		3,44	13,89	4 + 7
0	0	25	45,5		-,34	-,29	-,43	-,37		4,64	16,40	
TOTAL		55										

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ADMINISTRATION TIME: 51

LERTAP 2.0 — SUMMARY ITEM STATISTICS — PAGE 60

TEST NO 3 ACHIEVEMENT MONITORING, INST, L — SUBTEST 3 FACTS SPEED - SUBTRACTION

140

ITEM NUMBER 1

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	ITEM DESCRIPTIONS
C 1	1	45	81,8	C	,60	,58	,87	,83	C	4,98	20,64	
2	0	5	9,1		-,42	-,34	-,73	-,60		1,00	11,00	3 - 2
0	0	5	9,1		-,39	-,44	-,69	-,77		1,20	8,80	
TOTAL		55										

ITEM NUMBER 2

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	29	52,7	C	,63	,57	,80	,71	C	5,76	22,55	
2	0	15	27,3		-,33	-,21	-,44	-,28		2,93	16,27	6 - 4
0	0	11	20,0		-,42	-,48	-,60	-,68		2,18	11,82	
TOTAL		55										

ITEM NUMBER 3

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	42	76,4	C	,65	,61	,89	,84	C	5,17	21,14	
2	0	5	9,1		-,42	-,29	-,73	-,52		1,00	12,00	9 - 1
0	0	8	14,5		-,44	-,50	-,68	-,77		1,62	10,00	
TOTAL		55										

ITEM NUMBER 4

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	21	38,2	C	,75	,68	,95	,87	C	6,62	24,90	
2	0	16	29,1		-,36	-,17	-,48	-,22		2,87	16,81	7 - 3
0	0	18	32,7		-,42	-,54	-,55	-,71		2,78	13,11	
TOTAL		55										

ITEM NUMBER 5

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	41	74,5	C	,69	,68	,93	,92	C	5,27	21,54	
2	0	7	12,7		-,46	-,33	-,74	-,53		1,29	12,43	6 - 1
0	0	7	12,7		-,44	-,55	-,70	-,89		1,43	8,29	
TOTAL		55										

219

220

TEST NO 3 ACHIEVEMENT MONITORING, INST, L SUBTEST 3 FACTS SPEED - SUBTRACTION

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	24	43,6	C	,78	,71	,98	,90	C	6,46	24,50	
2	0	12	21,8		-,40	-,28	-,56	-,40		2,42	14,83	7 - 5
0	0	19	34,5		-,47	-,50	-,60	-,64		2,68	13,79	
TOTAL		55										

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	21	38,2	C	,65	,60	,83	,77	C	6,33	24,19	
2	0	9	16,4		-,25	-,20	-,37	-,30		2,89	15,44	10 - 4
0	0	25	45,5		-,45	-,44	-,57	-,55		3,04	15,24	
TOTAL		55										

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	7	12,7	C	,49	,39	,78	,62	C	7,43	26,00	
2	0	9	16,4		-,11	-,06	-,14	-,09		3,67	17,67	13 - 9
0	0	39	70,9		-,27	-,23	-,36	-,31		3,85	17,62	
TOTAL		55										

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	5	9,1	C	,43	,35	,75	,61	C	7,60	26,60	
2	0	9	16,4		-,11	-,07	-,16	-,10		3,67	17,56	14 - 8
0	0	41	74,5		-,19	-,17	-,25	-,23		4,00	17,98	
TOTAL		55										

PRINTED IN U.S.A.

ADMINISTRATION TIME: S2

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 1 ACHIEVEMENT MONITORING, INST. J SUBTEST 1 OBJECTIVES TEST

142

ITEM NUMBER 1

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	54	100.0	C	.00	.00	.00	.00	C	10.96	22.00
2	0	0	.0		.00	.00	.00	.00		.00	.00
3	0	0	.0		.00	.00	.00	.00		.00	.00
4	0	0	.0		.00	.00	.00	.00		.00	.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		54									

ITEM DESCRIPTIONS

Numerousness 0-10

ITEM NUMBER 2

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	0	.0		.00	.00	.00	.00		.00	.00
2	0	0	.0		.00	.00	.00	.00		.00	.00
C 3	1	54	100.0	C	.00	.00	.00	.00	C	10.96	22.00
4	0	0	.0		.00	.00	.00	.00		.00	.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		54									

Numerousness 11-20

ITEM NUMBER 3

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	35	64.8	C	.59	.47	.76	.60	C	11.91	24.09
2	0	9	16.7		-.02	.07	-.02	.10		10.89	22.89
3	0	3	5.6		-.51	-.47	-1.05	-.96		6.33	10.33
4	0	7	13.0		-.47	-.42	-.75	-.67		8.29	17.43
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		54									

Open Sentences Addition 0-9

ITEM NUMBER 4

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	2	3.7		-.40	-.42	-.93	-.99		6.50	9.00
C 2	1	48	88.9	C	.64	.56	1.02	.89	C	11.46	23.19
3	0	1	1.9		-.31	-.21	-.92	-.61		6.00	13.00
4	0	3	5.6		-.36	-.30	-.74	-.60		7.67	14.67
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		54									

Open Sentences Subtraction 0-9

223

224

TEST NO 1 ACHIEVEMENT MONITORING, INST. J SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 5

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
1	0	9	16.7		-.35	-.31	-.53	-.46		9.22	17.89	
2	0	3	5.6		-.03	-.23	-.07	-.47		10.67	16.33	
C 3	1	36	66.7	C	.58	.61	.75	.79	C	11.86	24.58	Problem Solving
4	0	6	11.1		-.42	-.38	-.70	-.63		8.33	15.50	Subt-simple separating 11-15
5	0	0	.0		.00	.00	.00	.00		.00	.00	
0	0	0	.0		.00	.00	.00	.00		.00	.00	
TOTAL		54										

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
1	0	7	13.0		-.42	-.35	-.67	-.55		8.57	16.57	
C 2	1	33	61.1	C	.70	.51	.89	.65	C	12.18	24.45	
3	0	6	11.1		-.29	-.17	-.48	-.28		9.17	19.17	Problem Solving
4	0	8	14.8		-.30	-.23	-.46	-.35		9.38	18.75	Subt-comparison 5-9
5	0	0	.0		.00	.00	.00	.00		.00	.00	
0	0	0	.0		.00	.00	.00	.00		.00	.00	
TOTAL		54										

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
1	0	0	.0		.00	.00	.00	.00		.00	.00	
C 2	1	49	90.7	C	.31	.27	.52	.44	C	11.18	22.51	
3	0	5	9.3		-.31	-.27	-.55	-.46		8.80	17.00	Ordering Sets
4	0	0	.0		.00	.00	.00	.00		.00	.00	One-to-one correspondence
5	0	0	.0		.00	.00	.00	.00		.00	.00	
0	0	0	.0		.00	.00	.00	.00		.00	.00	
TOTAL		54										

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	52	96.3	C	.18	.34	.33	.65	C	11.04	22.40	
2	0	0	.0		.00	.00	.00	.00		.00	.00	
3	0	1	1.9		-.25	-.25	-.74	-.75		7.00	11.00	Ordering Numbers 0-20
4	0	1	1.9		.00	-.23	.01	-.68		11.00	12.00	
5	0	0	.0		.00	.00	.00	.00		.00	.00	
0	0	0	.0		.00	.00	.00	.00		.00	.00	
TOTAL		54										

TEST NO 1 ACHIEVEMENT MONITORING, INST. J SUBTEST 1 OBJECTIVES TEST

144

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	1	1.9		.00	-.23	.01	-.68		11.00	12.00
2	0	0	.0		.00	.00	.00	.00		.00	.00
C 3	1	51	94.4	C	.36	.43	.66	.78	C	11.16	22.63
4	0	2	3.7		-.44	-.36	-1.04	-.84		6.00	11.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		54									

Sentence Writing (A)
Subt-simple separating 5-9

ITEM NUMBER 10

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	0	.0		.00	.00	.00	.00		.00	.00
C 2	1	47	87.0	C	.62	.50	.96	.78	C	11.49	23.17
3	0	1	1.9		-.06	-.09	-.18	-.27		10.00	18.00
4	0	6	11.1		-.64	-.50	-1.06	-.83		7.00	13.50
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		54									

Sentence Writing (A)
Add-part part whole 11-15

ITEM NUMBER 11

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	1	1.9		.13	.18	.38	.54		13.00	30.00
2	0	36	66.7		.19	.12	.24	.16		11.25	22.53
C 3	1	3	5.6	C	-.25	-.26	-.52	-.52	C	8.67	15.67
4	0	14	25.9		-.11	-.06	-.14	-.08		10.57	21.43
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		54									

Sentence Writing (B)
Subt-join-addend 11-15

ITEM NUMBER 12

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	5	9.3		-.34	-.23	-.60	-.41		8.60	17.60
C 2	1	36	66.7	C	.40	.24	.52	.31	C	11.58	23.03
3	0	4	7.4		.00	.13	.01	.24		11.00	24.75
4	0	9	16.7		-.24	-.21	-.36	-.32		9.78	19.11
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		54									

Sentence Writing (B)
Subt-unknown subtrahend 0-99

227

228

TEST NO 1 ACHIEVEMENT MONITORING, INSI, J SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 13

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
1	0	2	3.7		-.13	-.23	-.31	-.53		9.50	15.00	
2	0	6	11.1		-.05	-.12	-.08	-.20		10.67	20.00	
C 3	1	45	83.3	C	.24	.36	.35	.82	C	11.20	22.96	Counting On 9-18
4	0	1	1.9		-.37	-.39	-1.11	-1.16		5.00	5.00	
5	0	0	.0		.00	.00	.00	.00		.00	.00	
0	0	0	.0		.00	.00	.00	.00		.00	.00	
TOTAL		54										

ITEM NUMBER 14

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	27	50.0	C	.47	.34	.59	.43	C	12.00	24.07	
2	0	12	22.2		-.17	-.16	-.24	-.23		10.25	20.17	
3	0	8	14.8		-.06	-.08	-.10	-.12		10.62	20.87	Counting Back 9-18
4	0	7	13.0		-.42	-.23	-.67	-.36		8.57	18.43	
5	0	0	.0		.00	.00	.00	.00		.00	.00	
0	0	0	.0		.00	.00	.00	.00		.00	.00	
TOTAL		54										

ITEM NUMBER 15

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
1	0	4	7.4		-.09	-.11	-.17	-.20		10.25	19.75	
2	0	9	16.7		-.02	-.05	-.02	-.07		10.89	21.33	
C 3	1	22	40.7	C	.46	.34	.58	.44	C	12.18	24.50	Counting Back 18-31
4	0	19	35.2		-.41	-.26	-.53	-.33		9.74	18.89	
5	0	0	.0		.00	.00	.00	.00		.00	.00	
0	0	0	.0		.00	.00	.00	.00		.00	.00	
TOTAL		54										

145

ADMINISTRATION TIME: S2

LERTAP 2.0 SUMMARY ITEM STATISTICS PAGE 33

TEST NO 1 ACHIEVEMENT MONITORING, INST. J SUBTEST 2 FACTS SPEED = ADDITION

146

ITEM NUMBER 1

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	51	94.4	C	.39	.32	.70	.58	C	6.29	22.47
2	0	1	1.9		-.22	-.21	-.65	-.61		2.00	13.00
0	0	2	3.7		-.31	-.24	-.73	-.57		2.00	14.50
TOTAL		54									

ITEM DESCRIPTIONS: 1 + 5

ITEM NUMBER 2

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	46	85.2	C	.60	.48	.90	.72	C	6.70	23.20
2	0	2	3.7		-.39	-.28	-.91	-.65		1.00	13.50
0	0	6	11.1		-.45	-.37	-.74	-.62		2.83	15.67
TOTAL		54									

ITEM DESCRIPTIONS: 3 + 2

ITEM NUMBER 3

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	45	83.3	C	.67	.62	.99	.91	C	6.82	23.67
2	0	6	11.1		-.59	-.51	-.97	-.85		1.83	13.33
0	0	3	5.6		-.29	-.31	-.59	-.63		3.00	14.33
TOTAL		54									

ITEM DESCRIPTIONS: 4 + 4

ITEM NUMBER 4

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	37	68.5	C	.78	.73	1.02	.95	C	7.41	24.97
2	0	7	13.0		-.42	-.34	-.67	-.54		3.29	16.71
0	0	10	18.5		-.57	-.58	-.83	-.84		3.00	14.70
TOTAL		54									

ITEM DESCRIPTIONS: 3 + 6

ITEM NUMBER 5

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	36	66.7	C	.76	.65	.98	.85	C	7.42	24.78
2	0	8	14.8		-.42	-.32	-.64	-.49		3.50	17.37
0	0	10	18.5		-.53	-.50	-.78	-.73		3.20	15.70
TOTAL		54									

ITEM DESCRIPTIONS: 4 + 3

231

232

TEST NO 1 ACHIEVEMENT MONITORING, INST. J SUBTEST 2 FACTS SPEED - ADDITION

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	40	74,1	C	,81	,74	1,09	,99	C	7,27	24,62	
2	0	3	5,6		-,39	-,36	-,79	-,74		2,00	13,00	6 + 2
0	0	11	20,4		-,66	-,60	-,94	-,85		2,73	14,91	
TOTAL		54										

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	18	33,3	C	,68	,61	,88	,80	C	8,50	27,22	
2	0	7	13,0		-,25	-,28	-,39	-,45		4,43	17,57	5 + 8
0	0	29	53,7		-,48	-,39	-,60	-,49		4,93	19,83	
TOTAL		54										

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	18	33,3	C	,60	,46	,78	,60	C	8,22	25,94	
2	0	5	9,3		-,03	-,07	-,06	-,13		5,80	20,60	6 + 9
0	0	31	57,4		-,55	-,40	-,70	-,50		4,84	19,94	
TOTAL		54										

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	36	66,7	C	,68	,58	,88	,75	C	7,28	24,47	
2	0	7	13,0		-,22	-,16	-,36	-,25		4,57	19,57	9 + 3
0	0	11	20,4		-,61	-,55	-,86	-,78		3,00	15,45	
TOTAL		54										

ADMINISTRATION TIME: S2

LERTAP 2.0 SUMMARY ITEM STATISTICS PAGE 36

TEST NO 1 ACHIEVEMENT MONITORING, INST. J SUBTEST 3 FACTS SPEED - SUBTRACTION

148

ITEM NUMBER 1

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	ITEM DESCRIPTIONS
C 1	1	51	94,4	C	,39	,43	,71	,78	C	5,20	22,63	
2	0	2	3,7		-,26	-,24	-,61	-,57		2,00	14,50	5 - 1
0	0	1	1,9		-,31	-,39	-,91	-1,16		,00	5,00	
TOTAL		54										

ITEM NUMBER 2

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	42	77,8	C	,49	,37	,68	,51	C	5,57	23,19	
2	0	5	9,3		-,34	-,28	-,59	-,48		2,60	16,80	9 - 2
0	0	7	13,0		-,32	-,22	-,50	-,35		3,14	18,57	
TOTAL		54										

ITEM NUMBER 3

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	40	74,1	C	,67	,60	,91	,80	C	5,87	24,12	
2	0	5	9,3		-,40	-,30	-,69	-,52		2,20	16,40	8 - 7
0	0	9	16,7		-,48	-,47	-,72	-,70		2,56	15,67	
TOTAL		54										

ITEM NUMBER 4

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	39	72,2	C	,70	,58	,93	,78	C	5,95	24,18	
2	0	8	14,8		-,39	-,29	-,60	-,44		2,87	17,87	5 - 3
0	0	7	13,0		-,51	-,48	-,82	-,76		2,00	14,57	
TOTAL		54										

ITEM NUMBER 5

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	37	68,5	C	,69	,61	,90	,80	C	6,03	24,49	
2	0	5	9,3		-,37	-,23	-,64	-,41		2,40	17,60	7 - 6
0	0	12	22,2		-,51	-,52	-,72	-,72		2,83	16,17	
TOTAL		54										

TEST NO 1 ACHIEVEMENT MONITORING, INST, J SUBTEST 3 FACTS SPEED = SUBTRACTION

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	27	50.0	C	.69	.52	.86	.65	C	6.52	25.11	
2	0	12	22.2		-.23	-.17	-.33	-.24		4.00	20.08	8 - 5
0	0	15	27.8		-.55	-.42	-.73	-.56		3.80	17.93	
TOTAL		54										

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	14	25.9	C	.61	.53	.82	.71	C	7.29	27.36	
2	0	13	24.1		-.13	.08	-.18	.11		4.46	22.85	14 - 7
0	0	27	50.0		-.42	-.53	-.53	-.66		4.04	18.81	
TOTAL		54										

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	10	18.5	C	.62	.53	.90	.77	C	7.90	28.70	
2	0	11	20.4		-.26	-.15	-.37	-.22		3.82	20.18	12 - 5
0	0	33	61.1		-.28	-.30	-.35	-.38		4.48	20.58	
TOTAL		54										

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	9	16.7	C	.45	.43	.67	.64	C	7.22	27.78	
2	0	12	22.2		-.11	.01	-.16	.02		4.50	22.17	11 - 8
0	0	33	61.1		-.24	-.34	-.31	-.43		4.55	20.36	
TOTAL		54										

ADMINISTRATION TIME: S2

LERTAP 2.0 — SUMMARY ITEM STATISTICS — PAGE 40

TEST NO 2 ACHIEVEMENT MONITORING, INST, K — SUBTEST 1 OBJECTIVES TEST

150

ITEM NUMBER 1

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT
1	0	0	.0		.00	.00	.00	.00		.00	.00
C 2	1	58	100.0	C	.00	.00	.00	.00	C	10.90	22.16
3	0	0	.0		.00	.00	.00	.00		.00	.00
4	0	0	.0		.00	.00	.00	.00		.00	.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		58									

COEFFICIENTS OF CORRELATION — MEANS

ITEM DESCRIPTIONS

Numerousness 0-10

ITEM NUMBER 2

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT
C 1	1	54	93.1	C	.29	.19	.51	.33	C	11.07	22.43
2	0	2	3.4		-.08	.07	-.18	.16		10.00	24.00
3	0	2	3.4		-.33	-.33	-.79	-.79		7.00	13.00
4	0	0	.0		.00	.00	.00	.00		.00	.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		58									

COEFFICIENTS OF CORRELATION — MEANS

Numerousness 11-20

ITEM NUMBER 3

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT
1	0	1	1.7		-.17	-.13	-.53	-.40		8.00	17.00
2	0	0	.0		.00	.00	.00	.00		.00	.00
C 3	1	57	98.3	C	.17	.13	.35	.26	C	10.95	22.25
4	0	0	.0		.00	.00	.00	.00		.00	.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		58									

COEFFICIENTS OF CORRELATION — MEANS

Open Sentences Addition 0-9

ITEM NUMBER 4

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT
C 1	1	29	50.0	C	.51	.46	.64	.58	C	12.03	24.59
2	0	7	12.1		-.10	-.16	-.16	-.26		10.29	19.86
3	0	11	19.0		-.18	-.24	-.25	-.35		10.09	19.55
4	0	11	19.0		-.39	-.22	-.57	-.31		9.09	19.82
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		58									

COEFFICIENTS OF CORRELATION — MEANS

Open Sentences Subtraction 10-18

239

2.10

TEST NO. 2 ACHIEVEMENT MONITORING, INST. K SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 5

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	29	50.0	C	.54	.36	.68	.45	C	12.10	24.03
2	0	14	24.1		-.25	-.29	-.34	-.40		9.93	19.43
3	0	7	12.1		-.05	.08	-.09	.13		10.57	23.29
4	0	8	13.8		-.43	-.23	-.67	-.36		8.50	19.12
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		58									

Problem Solving
Subt-comparison 11-15

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	0	.0		.00	.00	.00	.00		.00	.00
C 2	1	58	100.0	C	.00	.00	.00	.00	C	10.90	22.16
3	0	0	.0		.00	.00	.00	.00		.00	.00
4	0	0	.0		.00	.00	.00	.00		.00	.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		58									

Problem Solving
Add-part part whole 5-9

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	1	1.7		-.11	-.13	-.34	-.40		9.00	17.00
C 2	1	56	96.6	C	.25	.20	.47	.39	C	11.00	22.36
3	0	1	1.7		-.23	-.16	-.71	-.47		7.00	16.00
4	0	0	.0		.00	.00	.00	.00		.00	.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		58									

Ordering Sets
One-to-one correspondence

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	0	.0		.00	.00	.00	.00		.00	.00
2	0	0	.0		.00	.00	.00	.00		.00	.00
C 3	1	57	98.3	C	.29	.26	.58	.52	C	10.98	22.33
4	0	1	1.7		-.29	-.26	-.89	-.78		6.00	12.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		58									

Ordering Numbers 0-20

TEST NO 2 ACHIEVEMENT MONITORING, INST. K SUBTEST 1 OBJECTIVES TEST

152

ITEM NUMBER 9

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST MEAN	TT MEAN
1	0	2	3.4		-.16	-.20	-.39	-.49		9.00	16.50
2	0	16	27.6		-.06	-.08	-.08	-.10		10.69	21.50
C 3	1	27	46.6	C	.45	.37	.56	.47	C	11.96	24.26
4	0	13	22.4		-.40	-.28	-.56	-.38		9.23	19.46
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		58									

Sentence Writing (A)
Subt-comparison 5-9

ITEM NUMBER 10

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST MEAN	TT MEAN
1	0	2	3.4		-.03	-.10	-.08	-.23		10.50	19.50
C 2	1	44	75.9	C	.44	.45	.61	.61	C	11.45	23.48
3	0	3	5.2		-.27	-.38	-.56	-.79		8.33	13.67
4	0	9	15.5		-.34	-.25	-.52	-.38		9.11	19.11
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		58									

Sentence Writing (A)
Subt-simple separating 11-15

ITEM NUMBER 11

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST MEAN	TT MEAN
1	0	3	5.2		-.09	-.08	-.20	-.17		10.00	20.33
2	0	0	.0		.00	.00	.00	.00		.00	.00
C 3	1	53	91.4	C	.29	.26	.48	.43	C	11.09	22.57
4	0	2	3.4		-.33	-.29	-.79	-.70		7.00	14.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		58									

Sentence Writing (B)
Add-simple joining 11-15

ITEM NUMBER 12

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST MEAN	TT MEAN
1	0	23	39.7		-.26	-.19	-.33	-.24		10.17	20.91
2	0	4	6.9		-.05	.02	-.09	.03		10.50	22.50
C 3	1	22	37.9	C	.61	.38	.78	.49	C	12.64	24.73
4	0	9	15.5		-.43	-.27	-.65	-.41		8.67	18.89
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		58									

Sentence Writing (B)
Subt-part part whole-addend 11-15

TEST NO 2 ACHIEVEMENT MONITORING, INST. K SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 13

	OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
	C 1	1	39	67.2	C	.46	.24	.60	.32	C	11.62	23.05
	2	0	6	10.3		-.29	-.14	-.49	-.24		9.00	20.00
	3	0	7	12.1		-.15	-.08	-.24	-.13		10.00	21.00
	4	0	6	10.3		-.26	-.15	-.45	-.25		9.17	19.83
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		58									

Counting On 9-18

ITEM NUMBER 14

	OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
	1	0	6	10.3		.04	.01	.07	.02		11.17	22.33
	C 2	1	21	36.2	C	.49	.41	.62	.52	C	12.33	25.00
	3	0	12	20.7		-.19	-.23	-.26	-.33		10.08	19.75
	4	0	19	32.8		-.36	-.22	-.47	-.29		9.74	20.47
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		58									

Counting Back 9-18

ITEM NUMBER 15

	OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
	1	0	12	20.7		-.22	-.25	-.32	-.36		9.92	19.58
	C 2	1	28	48.3	C	.56	.41	.70	.52	C	12.18	24.39
	3	0	7	12.1		-.13	.02	-.20	.03		10.14	22.43
	4	0	11	19.0		-.37	-.28	-.54	-.41		9.18	19.09
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		58									

Counting On 18-31

ADMINISTRATION TIME: S2

LERTAP 2.0 SUMMARY ITEM STATISTICS PAGE 45

TEST NO 2 ACHIEVEMENT MONITORING, INST. K SUBTEST 2 FACTS SPEED - ADDITION

154

ITEM NUMBER 1

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	ITEM DESCRIPTIONS
C 1	1	53	91.4	C	.64	.54	1.08	.90	C	6.74	23.02	
2	0	4	6.9		-.52	-.46	-1.00	-.88		2.00	13.25	3 + 1
0	0	1	1.7		-.37	-.26	-1.14	-.78		.00	12.00	
TOTAL		58										

ITEM NUMBER 2

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	49	84.5	C	.70	.56	1.03	.83	C	6.96	23.41	
2	0	3	5.2		-.41	-.27	-.86	-.57		2.33	16.00	2 + 5
0	0	6	10.3		-.53	-.46	-.89	-.79		2.83	15.00	
TOTAL		58										

ITEM NUMBER 3

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	54	93.1	C	.55	.41	.96	.71	C	6.63	22.74	
2	0	1	1.7		-.37	-.26	-1.14	-.78		.00	12.00	1 + 6
0	0	3	5.2		-.41	-.32	-.86	-.67		2.33	15.00	
TOTAL		58										

ITEM NUMBER 4

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	55	94.8	C	.48	.32	.88	.58	C	6.55	22.55	
2	0	2	3.4		-.32	-.20	-.77	-.49		2.50	16.50	7 + 2
0	0	1	1.7		-.37	-.26	-1.14	-.78		.00	12.00	
TOTAL		58										

ITEM NUMBER 5

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	44	75.9	C	.65	.46	.89	.63	C	7.11	23.52	
2	0	7	12.1		-.29	-.17	-.46	-.28		4.57	19.71	2 + 6
0	0	7	12.1		-.57	-.44	-.92	-.71		2.86	16.00	
TOTAL		58										

247

245

TEST NO 2 ACHIEVEMENT MONITORING, INST, K SUBTEST 2 FACTS SPEED = ADDITION

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	36	62.1	C	.66	.54	.84	.69	C	7.44	24.36	
2	0	5	8.6		-.04	-.07	-.07	-.12		6.00	21.00	3 + 5
0	0	17	29.3		-.68	-.53	-.90	-.70		3.94	17.82	
TOTAL		58										

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	22	37.9	C	.64	.59	.82	.75	C	8.14	26.09	
2	0	13	22.4		-.09	-.18	-.12	-.25		5.92	20.38	4 + 8
0	0	23	39.7		-.56	-.43	-.71	-.54		4.74	19.39	
TOTAL		58										

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	30	51.7	C	.70	.59	.87	.74	C	7.80	25.13	
2	0	5	8.6		-.29	-.31	-.51	-.56		4.20	16.80	3 + 7
0	0	23	39.7		-.55	-.42	-.69	-.53		4.78	19.43	
TOTAL		58										

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	22	37.9	C	.61	.60	.78	.77	C	8.05	26.18	
2	0	5	8.6		-.29	-.30	-.51	-.54		4.20	17.00	5 + 9
0	0	31	53.4		-.43	-.41	-.54	-.52		5.39	20.13	
TOTAL		58										

ADMINISTRATION TIME: S2

LERTAP 2.0 — SUMMARY ITEM STATISTICS — PAGE 48

TEST NO 2 ACHIEVEMENT MONITORING, INST. K — SUBTEST 3 FACTS SPEED - SUBTRACTION

159

ITEM NUMBER 1

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT
C 1	1	56	96.6	C	.36	.40	.70	.77	C	5.11	22.55
2	0	1	1.7		-.25	-.31	-.78	-.94		1.00	10.00
0	0	1	1.7		-.25	-.26	-.78	-.78		1.00	12.00
TOTAL		58									

COEFFICIENTS OF CORRELATION — MEANS — ITEM DESCRIPTIONS: 7 - 1

ITEM NUMBER 2

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT
C 1	1	42	72.4	C	.55	.47	.73	.63	C	5.67	23.69
2	0	5	8.6		-.11	-.16	-.20	-.29		4.20	19.40
0	0	11	19.0		-.54	-.43	-.79	-.62		2.64	17.55
TOTAL		58									

COEFFICIENTS OF CORRELATION — MEANS — ITEM DESCRIPTIONS: 8 - 4

ITEM NUMBER 3

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT
C 1	1	29	50.0	C	.68	.52	.86	.66	C	6.38	24.90
2	0	12	20.7		-.20	-.19	-.28	-.26		4.17	20.25
0	0	17	29.3		-.58	-.41	-.76	-.54		3.12	18.82
TOTAL		58									

COEFFICIENTS OF CORRELATION — MEANS — ITEM DESCRIPTIONS: 9 - 5

ITEM NUMBER 4

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT
C 1	1	25	43.1	C	.77	.65	.97	.81	C	6.80	26.04
2	0	9	15.5		-.27	-.26	-.41	-.39		3.67	19.00
0	0	24	41.4		-.58	-.46	-.73	-.58		3.54	19.29
TOTAL		58									

COEFFICIENTS OF CORRELATION — MEANS — ITEM DESCRIPTIONS: 7 - 4

ITEM NUMBER 5

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT
C 1	1	28	48.3	C	.58	.39	.73	.48	C	6.21	24.25
2	0	12	20.7		-.18	-.12	-.25	-.17		4.25	20.92
0	0	18	31.0		-.48	-.31	-.62	-.41		3.50	19.72
TOTAL		58									

COEFFICIENTS OF CORRELATION — MEANS — ITEM DESCRIPTIONS: 8 - 6

251

252

TEST NO 2 ACHIEVEMENT MONITORING, INST. K SUBTEST 3 FACTS SPEED - SUBTRACTION

ITEM NUMBER 6 COEFFICIENTS OF CORRELATION MEANS

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT	
C 1	1	48	82,8	C	,54	,39	,79	,56	C	5,48	23,08	
2	0	2	3,4		-,23	-,19	-,54	-,44		2,50	17,00	4 - 3
0	0	8	13,8		-,48	-,33	-,75	-,51		2,50	17,87	
TOTAL		58										

ITEM NUMBER 7 COEFFICIENTS OF CORRELATION MEANS

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT	
C 1	1	44	75,9	C	,42	,38	,57	,48	C	5,45	23,20	
2	0	6	10,3		-,19	-,15	-,31	-,25		3,83	19,83	11 - 2
0	0	8	13,8		-,36	-,31	-,56	-,48		3,13	18,12	
TOTAL		58										

ITEM NUMBER 8 COEFFICIENTS OF CORRELATION MEANS

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT	
C 1	1	4	6,9	C	,47	,41	,89	,78	C	8,50	30,00	
2	0	13	22,4		-,13	-,08	-,18	-,11		4,46	21,38	13 - 8
0	0	41	70,7		-,14	-,15	-,18	-,20		4,78	21,63	
TOTAL		58										

ITEM NUMBER 9 COEFFICIENTS OF CORRELATION MEANS

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT	
C 1	1	12	20,7	C	,58	,55	,83	,78	C	7,33	27,83	
2	0	10	17,2		-,06	,03	-,09	,04		4,70	22,50	12 - 7
0	0	36	62,1		-,44	-,49	-,56	-,62		4,25	20,17	
TOTAL		58										

ADMINISTRATION TIME: S2

LERTAP 2.0 SUMMARY ITEM STATISTICS PAGE 52

TEST NO 3 ACHIEVEMENT MONITORING, INST. L SUBTEST 1 OBJECTIVES TEST

158

ITEM NUMBER 1

	OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C	1	1	58	96.7	C	.05	.10	.09	.19	C	9.59	20.69
	2	0	0	.0		.00	.00	.00	.00		.00	.00
	3	0	0	.0		.00	.00	.00	.00		.00	.00
	4	0	2	3.3		-.05	-.10	-.12	-.23		9.00	17.50
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		60									

ITEM DESCRIPTIONS

Numerousness 0-10

ITEM NUMBER 2

	OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
	1	0	0	.0		.00	.00	.00	.00		.00	.00
C	2	1	57	95.0	C	.06	-.06	.11	-.10	C	9.60	20.51
	3	0	3	5.0		-.06	.06	-.13	.12		9.00	22.00
	4	0	0	.0		.00	.00	.00	.00		.00	.00
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		60									

Numerousness 11-20

ITEM NUMBER 3

	OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
	1	0	5	8.3		-.33	-.26	-.59	-.48		7.20	15.40
C	2	1	44	73.3	C	.65	.60	.88	.80	C	10.43	22.70
	3	0	0	.0		.00	.00	.00	.00		.00	.00
	4	0	11	18.3		-.52	-.49	-.75	-.72		7.18	14.45
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		60									

Open Sentences Addition 10-18

ITEM NUMBER 4

	OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C	1	1	40	66.7	C	.21	.36	.28	.46	C	9.90	22.07
	2	0	2	3.3		.25	.19	.60	.45		12.50	26.50
	3	0	10	16.7		-.16	-.26	-.23	-.38		8.80	17.20
	4	0	8	13.3		-.26	-.31	-.41	-.49		8.13	15.87
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		60									

Open Sentences Subtraction 0-9

TEST NO 3 ACHIEVEMENT MONITORING, INST. L SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 5

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	0	.0		.00	.00	.00	.00		.00	.00
2	0	4	6.7		-.04	-.07	-.07	-.14		9.25	19.00
C 3	1	48	80.0	C	.51	.46	.72	.65	C	10.12	21.94
4	0	8	13.3		-.57	-.49	-.90	-.77		6.37	13.25
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		60									

Problem Solving
Add-part part whole 11-15

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	58	96.7	C	.26	.13	.50	.25	C	9.67	20.72
2	0	0	.0		.00	.00	.00	.00		.00	.00
3	0	0	.0		.00	.00	.00	.00		.00	.00
4	0	2	3.3		-.26	-.13	-.63	-.31		6.50	16.50
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		60									

Problem Solving
Subt-simple separating 5-9

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	0	.0		.00	.00	.00	.00		.00	.00
2	0	0	.0		.00	.00	.00	.00		.00	.00
C 3	1	59	98.3	C	.21	.01	.43	.03	C	9.63	20.59
4	0	1	1.7		-.21	-.01	-.65	-.04		6.00	20.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		60									

Ordering Sets
One-to-one correspondence

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	2	3.3		-.26	-.24	-.63	-.58		6.50	13.00
C 2	1	53	88.3	C	.43	.37	.67	.58	C	9.91	21.38
3	0	3	5.0		-.16	-.22	-.35	-.46		8.00	15.00
4	0	2	3.3		-.30	-.16	-.73	-.39		6.00	15.50
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		60									

Ordering Numbers 0-20

159

TEST NO 3 ACHIEVEMENT MONITORING, INST. L SUBTEST 1 OBJECTIVES TEST

160

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	23	38.3		-.03	-.05	-.04	-.06		9.48	20.22
C 2	1	19	31.7	C	.53	.39	.69	.51	C	11.26	24.00
3	0	1	1.7		-.09	-.17	-.29	-.52		8.00	13.00
4	0	17	28.3		-.48	-.31	-.64	-.41		7.88	17.71
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		60									

Sentence Writing (A)
Subt- comparison11-15

ITEM NUMBER 10

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	4	6.7		-.07	.06	-.13	.12		9.00	22.00
2	0	1	1.7		-.21	-.19	-.65	-.58		6.00	12.00
C 3	1	47	78.3	C	.39	.20	.55	.28	C	10.02	21.21
4	0	8	13.3		-.35	-.22	-.55	-.35		7.62	17.25
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		60									

Sentence Writing (A)
Add-part part whole 5-9

ITEM NUMBER 11

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	2	3.3		-.13	-.24	-.32	-.58		8.00	13.00
2	0	36	60.0		.07	.16	.09	.20		9.69	21.36
C 3	1	4	6.7	C	-.01	-.00	-.02	-.01	C	9.50	20.50
4	0	18	30.0		-.02	-.08	-.03	-.10		9.50	19.89
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		60									

Sentence Writing (B)
Subt-join-addend 11-15

ITEM NUMBER 12

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	24	40.0		.07	-.10	.09	-.13		9.75	19.83
C 2	1	16	26.7	C	.29	.30	.39	.40	C	10.62	23.50
3	0	5	8.3		-.02	-.03	-.04	-.05		9.40	20.00
4	0	15	25.0		-.36	-.17	-.49	-.23		8.20	18.87
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		60									

Sentence Writing (B)
Subt-part part whole-addend
0-99

TEST NO 3 ACHIEVEMENT MONITORING, INST. L SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 13

	OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
	1	0	7	11.7		-.07	-.16	-.11	-.26		9.14	18.00
	2	0	13	21.7		-.21	-.01	-.29	-.02		8.69	20.46
C	3	1	25	41.7	C	.41	.28	.52	.36	C	10.64	22.56
	4	0	14	23.3		-.27	-.25	-.37	-.35		8.50	17.86
	5	0	1	1.7		.14	.19	.45	.57		12.00	29.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		60									

Counting Back 9-18

ITEM NUMBER 14

	OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C	1	1	20	33.3	C	.69	.57	.89	.74	C	11.70	25.35
	2	0	18	30.0		-.12	-.10	-.16	-.13		9.17	19.67
	3	0	13	21.7		-.30	-.27	-.42	-.38		8.31	17.54
	4	0	9	15.0		-.41	-.31	-.62	-.47		7.44	16.22
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		60									

Counting On 18-31

ITEM NUMBER 15

	OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
	1	0	18	30.0		-.38	-.37	-.51	-.48		8.28	17.28
C	2	1	26	43.3	C	.62	.53	.78	.67	C	11.12	24.19
	3	0	3	5.0		-.23	-.13	-.49	-.27		7.33	17.33
	4	0	13	21.7		-.19	-.17	-.27	-.24		8.77	18.69
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		60									

Counting On 9-18

ADMINISTRATION TIME: S2

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 3 ACHIEVEMENT MONITORING, INST. L SUBTEST 2 FACTS SPEED - ADDITION

ITEM NUMBER 1

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT
C 1	1	35	58.3	C	.75	.69	.95	.87	C	7.91	24.03
2	0	9	15.0		-.25	-.22	-.39	-.33		4.67	17.56
0	0	16	26.7		-.63	-.60	-.85	-.80		3.50	14.75
TOTAL		60									

COEFFICIENTS OF CORRELATION — MEANS — ITEM DESCRIPTIONS: 2 + 4

ITEM NUMBER 2

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT
C 1	1	38	63.3	C	.73	.65	.94	.84	C	7.71	23.53
2	0	9	15.0		-.29	-.33	-.44	-.50		4.44	16.00
0	0	13	21.7		-.61	-.48	-.85	-.68		3.23	15.15
TOTAL		60									

COEFFICIENTS OF CORRELATION — MEANS — 6 + 3

ITEM NUMBER 3

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT
C 1	1	47	78.3	C	.65	.54	.91	.75	C	7.15	22.26
2	0	4	6.7		-.08	-.08	-.15	-.16		5.50	18.75
0	0	9	15.0		-.70	-.56	-1.07	-.86		1.89	12.67
TOTAL		60									

COEFFICIENTS OF CORRELATION — MEANS — 5 + 2

ITEM NUMBER 4

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT
C 1	1	43	71.7	C	.61	.53	.81	.70	C	7.26	22.53
2	0	7	11.7		-.21	-.11	-.35	-.19		4.71	18.71
0	0	10	16.7		-.55	-.54	-.83	-.80		3.00	13.50
TOTAL		60									

COEFFICIENTS OF CORRELATION — MEANS — 2 + 3

ITEM NUMBER 5

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST	TT
C 1	1	55	91.7	C	.51	.40	.86	.67	C	6.65	21.29
2	0	3	5.0		-.34	-.28	-.72	-.60		2.33	13.33
0	0	2	3.3		-.37	-.27	-.90	-.65		1.00	12.00
TOTAL		60									

COEFFICIENTS OF CORRELATION — MEANS — 5 + 0

263

264

TEST NO 3 ACHIEVEMENT MONITORING, INST. L SUBTEST 2 FACTS SPEED = ADDITION

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	46	76.7	C	.59	.51	.81	.70	C	7.11	22.24	1 + 3
2	0	9	15.0		-.29	-.27	-.44	-.41		4.44	16.78	
0	0	5	8.3		-.53	-.43	-.96	-.77		1.60	12.20	
TOTAL		60										

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	48	80.0	C	.67	.62	.94	.88	C	7.12	22.42	9 + 2
2	0	4	6.7		-.23	-.34	-.44	-.66		4.00	13.00	
0	0	8	13.3		-.62	-.48	-.97	-.76		2.12	13.37	
TOTAL		60										

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	36	60.0	C	.71	.65	.90	.82	C	[illegible]	23.72	6 + 6
2	0	9	15.0		-.27	-.21	-.42	[illegible]		4.56	17.67	
0	0	15	25.0		-.58	-.57	-.79	[illegible]		3.60	14.80	
TOTAL		60										

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	27	45.0	C	.71	.66	.89	.84	C	8.30	24.93	4 + 7
2	0	8	13.3		-.11	-.24	-.18	-.38		5.50	17.00	
0	0	25	41.7		-.63	-.51	-.80	-.64		4.28	17.04	
TOTAL		60										

ADMINISTRATION TIME: S2

LERTAP 2.0 — SUMMARY ITEM STATISTICS — PAGE 60

TEST NO 3 ACHIEVEMENT MONITORING, INST. L — SUBTEST 3 FACTS SPEED - SUBTRACTION

164

ITEM NUMBER 1

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		MEANS ST	MEANS TT
C 1	1	55	91.7	C	.57	.45	.96	.75	C	5.13	21.38
2	0	3	5.0		-.37	-.32	-.79	-.68		1.33	12.33
0	0	2	3.3		-.42	-.30	-1.02	-.73		.00	11.00
TOTAL		60									

ITEM DESCRIPTIONS: 3 - 2

ITEM NUMBER 2

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		MEANS ST	MEANS TT
C 1	1	36	60.0	C	.74	.66	.93	.83	C	6.03	23.75
2	0	9	15.0		-.44	-.44	-.68	-.67		2.56	14.44
0	0	15	25.0		-.47	-.38	-.64	-.52		3.07	16.67
TOTAL		60									

ITEM DESCRIPTIONS: 6 - 4

ITEM NUMBER 3

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		MEANS ST	MEANS TT
C 1	1	48	80.0	C	.66	.52	.93	.74	C	5.46	22.12
2	0	4	6.7		-.48	-.44	-.92	-.86		1.00	10.75
0	0	8	13.3		-.42	-.29	-.67	-.45		2.50	16.25
TOTAL		60									

ITEM DESCRIPTIONS: 9 - 1

ITEM NUMBER 4

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		MEANS ST	MEANS TT
C 1	1	33	55.0	C	.68	.43	.86	.54	C	6.06	22.88
2	0	10	16.7		-.23	-.10	-.34	-.14		3.70	19.30
0	0	17	28.3		-.56	-.39	-.75	-.52		2.88	16.88
TOTAL		60									

ITEM DESCRIPTIONS: 7 - 3

ITEM NUMBER 5

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		MEANS ST	MEANS TT
C 1	1	45	75.0	C	.60	.60	.81	.82	C	5.49	22.64
2	0	3	5.0		-.30	-.27	-.64	-.57		2.00	13.67
0	0	12	20.0		-.48	-.51	-.69	-.73		2.75	14.58
TOTAL		60									

ITEM DESCRIPTIONS: 6 - 1

TEST NO 3 ACHIEVEMENT MONITORING, INST. L SUBTEST 3 FACTS SPEED - SUBTRACTION

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	37	61.7	C	.61	.50	.78	.63	C	5.78	22.89	
2	0	11	18.3		-.28	-.19	-.40	-.27		3.55	18.27	7 - 5
0	0	12	20.0		-.48	-.42	-.69	-.60		2.75	15.58	
TOTAL		60										

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	28	46.7	C	.68	.58	.85	.73	C	6.29	24.25	
2	0	7	11.7		-.23	-.11	-.38	-.17		3.43	18.86	10 - 4
0	0	25	41.7		-.53	-.52	-.67	-.65		3.44	16.96	
TOTAL		60										

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	2	3.3	C	.20	.19	.48	.45	C	7.00	26.50	
2	0	10	16.7		.03	.06	.04	.09		4.90	21.40	13 - 9
0	0	48	80.0		-.12	-.14	-.16	-.20		4.65	20.17	
TOTAL		60										

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	2	3.3	C	.29	.25	.69	.60	C	8.00	28.50	
2	0	8	13.3		.18	.22	.29	.35		5.75	23.87	14 - 8
0	0	50	83.3		-.31	-.32	-.45	-.47		4.48	19.74	
TOTAL		60										

ITEM NUMBER 1

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	ITEM DESCRIPTIONS
C 1	1	60	100.0	C	.00	.00	.00	.00	C	10.63	22.12	
2	0	0	.0		.00	.00	.00	.00		.00	.00	
3	0	0	.0		.00	.00	.00	.00		.00	.00	
4	0	0	.0		.00	.00	.00	.00		.00	.00	Numerousness 0-10
5	0	0	.0		.00	.00	.00	.00		.00	.00	
0	0	0	.0		.00	.00	.00	.00		.00	.00	
TOTAL		60										

ITEM NUMBER 2

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
1	0	0	.0		.00	.00	.00	.00		.00	.00	
2	0	0	.0		.00	.00	.00	.00		.00	.00	
C 3	1	59	98.3	C	.10	.14	.20	.29	C	10.66	22.22	
4	0	1	1.7		-.10	-.14	-.30	-.44		9.00	16.00	Numerousness 11-20
5	0	0	.0		.00	.00	.00	.00		.00	.00	
0	0	0	.0		.00	.00	.00	.00		.00	.00	
TOTAL		60										

ITEM NUMBER 3

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	33	55.0	C	.47	.48	.59	.60	C	11.55	24.52	
2	0	20	33.3		-.19	-.22	-.25	-.28		10.05	20.40	
3	0	5	8.3		-.31	-.32	-.56	-.58		8.40	16.20	
4	0	2	3.3		-.31	-.25	-.76	-.61		7.00	14.50	Open Sentences Addition 0-9
5	0	0	.0		.00	.00	.00	.00		.00	.00	
0	0	0	.0		.00	.00	.00	.00		.00	.00	
TOTAL		60										

ITEM NUMBER 4

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
1	0	1	1.7		.08	.16	.25	.50		12.00	29.00	
C 2	1	48	80.0	C	.34	.20	.48	.28	C	11.00	22.67	
3	0	5	8.3		-.12	-.10	-.21	-.19		9.80	20.20	
4	0	6	10.0		-.38	-.24	-.65	-.40		8.17	18.17	Open Sentences Subtraction 0-9
5	0	0	.0		.00	.00	.00	.00		.00	.00	
0	0	0	.0		.00	.00	.00	.00		.00	.00	
TOTAL		60										

TEST NO 1 ACHIEVEMENT MONITORING, INST, J SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 5

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	7	11.7		-.15	-.04	-.25	-.06		9.71	21.57
2	0	0	.0		.00	.00	.00	.00		.00	.00
C 3	1	47	78.3	C	.49	.29	.68	.41	C	11.19	22.98
4	0	6	10.0		-.51	-.37	-.87	-.62		7.33	16.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		60									

Problem Solving
Subt-simple separating 11-15

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	5	8.3		-.06	-.10	-.11	-.19		10.20	20.20
C 2	1	37	61.7	C	.52	.61	.66	.77	C	11.51	24.78
3	0	14	23.3		-.34	-.39	-.48	-.53		9.29	18.21
4	0	4	6.7		-.36	-.41	-.69	-.80		7.75	13.50
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		60									

Problem Solving
Subt-comparison 5-9

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	0	.0		.00	.00	.00	.00		.00	.00
C 2	1	56	93.3	C	.60	.41	1.06	.72	C	10.98	22.73
3	0	2	3.3		-.31	-.22	-.76	-.53		7.00	15.50
4	0	2	3.3		-.53	-.35	-1.28	-.86		4.50	11.50
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		60									

Ordering Sets
One-to-one correspondence

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	60	100.0	C	.00	.00	.00	.00	C	10.63	22.12
2	0	0	.0		.00	.00	.00	.00		.00	.00
3	0	0	.0		.00	.00	.00	.00		.00	.00
4	0	0	.0		.00	.00	.00	.00		.00	.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		60									

Ordering Numbers 0-20

TEST NO 1 ACHIEVEMENT MONITORING, INST. J SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 9

	OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
	1	0	1	1.7		-.16	-.31	-.49	-.95		8.00	9.00
	2	0	4	6.7		-.20	-.22	-.39	-.43		9.00	17.50
C	3	1	53	88.3	C	.54	.51	.85	.80	C	11.06	23.15
	4	0	2	3.3		-.57	-.39	-1.38	-.94		4.00	10.50
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		60									

Sentence Writing (A)
Subt-simple separating 5-9

ITEM NUMBER 10

	OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
	1	0	2	3.3		-.14	-.12	-.34	-.29		9.00	18.50
C	2	1	54	90.0	C	.41	.23	.66	.37	C	10.93	22.54
	3	0	0	.0		.00	.00	.00	.00		.00	.00
	4	0	4	6.7		-.39	-.19	-.75	-.36		7.50	18.25
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		60									

Sentence Writing (A)
Add-part part whole 11-15

ITEM NUMBER 11

	OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
	1	0	6	10.0		-.02	-.13	-.04	-.22		10.50	20.00
	2	0	37	61.7		.12	.13	.15	.16		10.84	22.68
C	3	1	7	11.7	C	.16	.17	.26	.28	C	11.57	24.71
	4	0	9	15.0		-.32	-.23	-.49	-.36		9.00	19.00
	5	0	1	1.7		.08	.04	.25	.14		12.00	24.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		60									

Sentence Writing (B)
Subt-join-addend 11-15

ITEM NUMBER 12

	OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
	1	0	7	11.7		-.27	-.31	-.45	-.50		9.00	17.43
C	2	1	44	73.3	C	.47	.46	.63	.61	C	11.25	23.66
	3	0	4	6.7		-.14	-.19	-.27	-.36		9.50	18.25
	4	0	5	8.3		-.31	-.21	-.56	-.38		8.40	18.20
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		60									

Sentence Writing (B)
Subt-unknown subtrahend 0-99

TEST NO 1 ACHIEVEMENT MONITORING, INST. J SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 13

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	9	15.0		-.45	-.50	-.69	-.77		8.33	15.44
2	0	5	8.3		-.42	-.41	-.76	-.73		7.60	14.60
C 3	1	45	75.0	C	.67	.72	.91	.97	C	11.47	24.42
4	0	1	1.7		-.10	-.14	-.30	-.44		9.00	16.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		60									

Counting On 9-18

ITEM NUMBER 14

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	16	26.7	C	.33	.10	.44	.14	C	11.81	23.06
2	0	14	23.3		-.02	.04	-.02	.06		10.57	22.57
3	0	18	30.0		-.01	.01	-.01	.02		10.61	22.22
4	0	11	18.3		-.36	-.21	-.52	-.31		9.00	19.64
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	1	1.7		.02	.09	.07	.28		11.00	26.00
TOTAL		60									

Counting Back 9-18

ITEM NUMBER 15

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	6	10.0		-.02	.01	-.04	.02		10.50	22.33
2	0	14	23.3		.06	-.06	.08	-.08		10.86	21.50
C 3	1	19	31.7	C	.40	.36	.52	.47	C	11.89	25.05
4	0	21	35.0		-.43	-.30	-.55	-.39		9.38	19.81
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		60									

Counting Back 18-31

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 1 ACHIEVEMENT MONITORING, INST. J SUBTEST 2 FACTS SPEED - ADDITION

ITEM NUMBER 1

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	ITEM DESCRIPTIONS
C 1	1	54	90.0	C	.49	.41	.79	.66	C	6.52	22.87	
2	0	6	10.0		-.49	-.41	-.83	-.69		3.00	15.33	1 + 5
0	0	0	.0		.00	.00	.00	.00		.00	.00	
TOTAL		60										

ITEM NUMBER 2

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	54	90.0	C	.54	.36	.87	.58	C	6.56	22.78	
2	0	4	6.7		-.48	-.36	-.93	-.70		2.25	14.50	3 + 2
0	0	2	3.3		-.23	-.09	-.55	-.21		3.50	19.50	
TOTAL		60										

ITEM NUMBER 3

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	57	95.0	C	.44	.37	.81	.69	C	6.39	22.60	
2	0	3	5.0		-.44	-.37	-.93	-.79		2.00	13.00	4 + 4
0	0	0	.0		.00	.00	.00	.00		.00	.00	
TOTAL		60										

ITEM NUMBER 4

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	40	66.7	C	.66	.62	.85	.80	C	7.17	24.55	
2	0	9	15.0		-.53	-.43	-.81	-.65		3.44	16.44	3 + 6
0	0	11	18.3		-.31	-.36	-.46	-.52		4.73	17.91	
TOTAL		60										

ITEM NUMBER 5

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	43	71.7	C	.70	.58	.92	.77	C	7.12	24.14	
2	0	6	10.0		-.41	-.35	-.70	-.59		3.50	16.33	4 + 3
0	0	11	18.3		-.49	-.40	-.72	-.89		3.91	17.36	
TOTAL		60										

279

230

TEST NO 1 ACHIEVEMENT MONITORING, INST. J SUBTEST 2 FACTS SPEED = ADDITION

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	51	85.0	C	.61	.59	.92	.89	C	6.73	23.51	
2	0	6	10.0		-.56	-.45	-.96	-.76		2.50	14.67	6 + 2
0	0	3	5.0		-.23	-.36	-.48	-.76		4.00	13.33	
TOTAL		60										

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	16	26.7	C	.67	.56	.90	.76	C	8.56	27.31	
2	0	10	16.7		-.18	-.11	-.27	-.16		5.30	20.80	5 + 8
0	0	34	56.7		-.46	-.42	-.58	-.53		5.29	20.06	
TOTAL		60										

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	16	26.7	C	.72	.66	.97	.88	C	8.75	28.19	
2	0	7	11.7		-.46	-.37	-.75	-.61		3.43	16.43	6 + 9
0	0	37	61.7		-.35	-.35	-.45	-.45		5.57	20.57	
TOTAL		60										

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	39	65.0	C	.65	.58	.84	.74	C	7.21	24.49	
2	0	13	21.7		-.56	-.53	-.79	-.74		3.85	16.54	9 + 3
0	0	8	13.3		-.23	-.18	-.37	-.28		4.87	19.62	
TOTAL		60										

ADMINISTRATION TIME: 53

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 1 ACHIEVEMENT MONITORING, INST. J SUBTEST 3 FACTS SPEED - SUBTRACTION

ITEM NUMBER 1

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST MEAN	TT MEAN
C 1	1	57	95.0	C	.54	.46	.99	.84	C	5.58	22.70
2	0	2	3.3		-.42	-.32	-1.02	-.77		.50	12.50
0	0	1	1.7		-.33	-.33	-1.01	-1.02		.00	8.00
TOTAL		60									

ITEM DESCRIPTIONS: 5 - 1

ITEM NUMBER 2

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST MEAN	TT MEAN
C 1	1	48	80.0	C	.53	.50	.75	.71	C	5.87	23.52
2	0	9	15.0		-.53	-.44	-.81	-.67		2.67	16.33
0	0	3	5.0		-.11	-.21	-.23	-.44		4.33	17.00
TOTAL		60									

ITEM DESCRIPTIONS: 9 - 2

ITEM NUMBER 3

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST MEAN	TT MEAN
C 1	1	44	73.3	C	.66	.52	.88	.70	C	6.16	23.86
2	0	7	11.7		-.37	-.31	-.61	-.50		3.14	17.43
0	0	9	15.0		-.48	-.37	-.74	-.56		2.89	17.22
TOTAL		60									

ITEM DESCRIPTIONS: 8 - 7

ITEM NUMBER 4

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST MEAN	TT MEAN
C 1	1	50	83.3	C	.59	.44	.87	.65	C	5.88	23.22
2	0	6	10.0		-.36	-.27	-.62	-.45		3.00	17.67
0	0	4	6.7		-.45	-.34	-.87	-.66		1.75	15.00
TOTAL		60									

ITEM DESCRIPTIONS: 5 - 3

ITEM NUMBER 5

OPTION	WT	N	P		PB-ST	PB-TT	B-ST	B-TT		ST MEAN	TT MEAN
C 1	1	46	76.7	C	.68	.56	.93	.77	C	6.11	23.85
2	0	7	11.7		-.50	-.42	-.81	-.68		2.43	15.71
0	0	7	11.7		-.40	-.32	-.65	-.53		3.00	17.14
TOTAL		60									

ITEM DESCRIPTIONS: 7 - 6

283

284

TEST NO 1 ACHIEVEMENT MONITORING, INST. J SUBTEST 3 FACTS SPEED - SUBTRACTION

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	32	53.3	C	.66	.49	.83	.62	C	6.62	24.69	
2	0	12	20.0		-.43	-.38	-.61	-.54		3.50	17.92	8 - 5
0	0	16	26.7		-.36	-.22	-.48	-.29		4.06	20.12	
TOTAL		60										

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	9	15.0	C	.55	.52	.85	.79	C	8.11	29.00	
2	0	11	18.3		-.21	-.08	-.31	-.12		4.36	21.18	14 - 7
0	0	40	66.7		-.24	-.33	-.32	-.42		4.95	20.82	
TOTAL		60										

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	13	21.7	C	.59	.61	.83	.85	C	7.69	28.54	
2	0	14	23.3		-.29	-.23	-.40	-.32		4.21	19.79	12 - 5
0	0	33	55.0		-.24	-.31	-.31	-.38		4.65	20.58	
TOTAL		60										

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	20	33.3	C	.46	.46	.60	.60	C	6.70	25.75	
2	0	10	16.7		-.32	-.29	-.48	-.43		3.80	18.50	11 - 8
0	0	30	50.0		-.20	-.22	-.25	-.27		4.90	20.90	
TOTAL		60										

ADMINISTRATION TIME: S3

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 2 ACHIEVEMENT MONITORING, INST. K SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 1

	OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
	1	0	0	.0		.00	.00	.00	.00		.00	.00
C	2	1	55	100.0	C	.00	.00	.00	.00	C	11.80	24.76
	3	0	0	.0		.00	.00	.00	.00		.00	.00
	4	0	0	.0		.00	.00	.00	.00		.00	.00
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		55									

ITEM DESCRIPTIONS

Numerousness 0-10

ITEM NUMBER 2

	OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C	1	1	53	96.4	C	.34	.26	.65	.50	C	11.94	25.06
	2	0	1	1.8		-.24	-.18	-.71	-.55		8.00	17.00
	3	0	1	1.8		-.24	-.18	-.71	-.55		8.00	17.00
	4	0	0	.0		.00	.00	.00	.00		.00	.00
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		55									

Numerousness 11-20

ITEM NUMBER 3

	OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
	1	0	0	.0		.00	.00	.00	.00		.00	.00
	2	0	0	.0		.00	.00	.00	.00		.00	.00
C	3	1	55	100.0	C	.00	.00	.00	.00	C	11.80	24.76
	4	0	0	.0		.00	.00	.00	.00		.00	.00
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		55									

Open Sentences Addition 0-9

ITEM NUMBER 4

	OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C	1	1	36	65.5	C	.48	.46	.62	.60	C	12.56	26.69
	2	0	5	9.1		.09	-.06	.15	-.11		12.40	23.60
	3	0	9	16.4		-.41	-.29	-.62	-.43		9.78	21.00
	4	0	4	7.3		-.33	-.33	-.62	-.62		9.25	18.00
	5	0	1	1.8		-.11	-.07	-.34	-.20		10.00	22.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		55									

Open Sentences Subtraction 10-18

TEST NO 2 ACHIEVEMENT MONITORING, INST, K SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 5

	OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C	1	1	37	67.3	C	.54	.35	.70	.45	C	12.62	26.16
	2	0	8	14.5		-.29	-.34	-.46	-.53		10.25	20.00
	3	0	8	14.5		-.27	-.02	-.42	-.03		10.37	24.50
	4	0	2	3.6		-.30	-.19	-.69	-.46		8.50	19.00
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		55									

Problem Solving
Subt-comparison 11-15

ITEM NUMBER 6

	OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
	1	0	0	.0		.00	.00	.00	.00		.00	.00
C	2	1	54	98.2	C	.24	.14	.48	.27	C	11.87	24.87
	3	0	0	.0		.00	.00	.00	.00		.00	.00
	4	0	1	1.8		-.24	-.14	-.71	-.41		8.00	19.00
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		55									

Problem Solving
Add-part part whole 5-9

ITEM NUMBER 7

	OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
	1	0	4	7.3		-.46	-.44	-.86	-.82		8.25	15.75
C	2	1	51	92.7	C	.46	.44	.79	.76	C	12.08	25.47
	3	0	0	.0		.00	.00	.00	.00		.00	.00
	4	0	0	.0		.00	.00	.00	.00		.00	.00
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		55									

Ordering Sets
One-to-one correspondence

ITEM NUMBER 8

	OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
	1	0	0	.0		.00	.00	.00	.00		.00	.00
	2	0	1	1.8		.14	.12	.41	.37		14.00	30.00
C	3	1	54	98.2	C	-.14	-.12	-.28	-.25	C	11.76	24.67
	4	0	0	.0		.00	.00	.00	.00		.00	.00
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		55									

Ordering Numbers 0-20

TEST NO 2 ACHIEVEMENT MONITORING, INST, K SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	3	5.5		-.35	-.32	-.71	-.67		8.67	17.00
2	0	21	38.2		-.24	-.00	-.30	-.00		11.14	24.76
C 3	1	27	49.1	C	.48	.23	.60	.29	C	12.85	26.11
4	0	4	7.3		-.17	-.16	-.32	-.30		10.50	21.50
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		55									

Sentence Writing (A)
Subt-comparison 5-9

ITEM NUMBER 10

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	3	5.5		-.24	-.21	-.49	-.44		9.67	19.67
C 2	1	49	89.1	C	.42	.32	.68	.51	C	12.12	25.41
3	0	2	3.6		-.34	-.24	-.80	-.62		8.00	17.00
4	0	1	1.8		-.11	-.02	-.34	-.05		10.00	24.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		55									

Sentence Writing (A)
Subt-simple separating 11-15

ITEM NUMBER 11

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	3	5.5		-.35	-.45	-.71	-.92		8.67	14.00
2	0	3	5.5		-.13	.02	-.26	.05		10.67	25.33
C 3	1	48	87.3	C	.37	.30	.57	.46	C	12.10	25.42
4	0	1	1.8		-.11	-.02	-.34	-.05		10.00	24.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		55									

Sentence Writing (B)
Add-simple joining 11-15

ITEM NUMBER 12

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	20	36.4		-.54	-.32	-.69	-.41		10.25	22.30
2	0	0	.0		.00	.00	.00	.00		.00	.00
C 3	1	33	60.0	C	.57	.31	.73	.40	C	12.82	26.24
4	0	2	3.6		-.12	.01	-.27	.02		10.50	25.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		55									

Sentence Writing (B)
Subt-part part whole-addend 11-15

TEST NO 2 ACHIEVEMENT MONITORING, INST. K SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 13

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	42	76.4	C	.54	.38	.74	.52	C	12.45	25.98
2	0	4	7.3		-.14	-.03	-.25	-.05		10.75	24.25
3	0	8	14.5		-.46	-.39	-.71	-.60		9.38	19.37
4	0	0	.0		.00	.00	.00	.00		.00	.00
5	0	1	1.8		-.24	-.14	-.71	-.41		8.00	19.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		55									

Counting On 9-18

ITEM NUMBER 14

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	15	27.3		-.15	-.14	-.20	-.19		11.27	23.47
C 2	1	22	40.0	C	.54	.56	.68	.71	C	13.23	28.68
3	0	13	23.6		-.26	-.33	-.36	-.46		10.77	21.31
4	0	5	9.1		-.29	-.24	-.51	-.42		9.80	20.40
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		55									

Counting Back 9-18

ITEM NUMBER 15

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	14	25.5		-.27	-.06	-.37	-.08		10.79	24.21
C 2	1	33	60.0	C	.46	.33	.58	.42	C	12.61	26.30
3	0	3	5.5		-.09	-.32	-.18	-.67		11.00	17.00
4	0	4	7.3		-.30	-.21	-.56	-.39		9.50	20.50
5	0	1	1.8		-.05	-.07	-.15	-.20		11.00	22.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		55									

Counting On 18-31

177

ADMINISTRATION TIME: 53

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 2 ACHIEVEMENT MONITORING, INST. K SUBTEST 2 FACTS SPEED - ADDITION

ITEM NUMBER 1

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	ITEM DESCRIPTIONS
C 1	1	53	96.4	C	.26	.14	.50	.28	C	7.15	24.92	
2	0	2	3.6		-.26	-.14	-.61	-.34		4.00	20.50	3 + 1
0	0	0	.0		.00	.00	.00	.00		.00	.00	
TOTAL		55										

ITEM NUMBER 2

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	50	90.9	C	.71	.62	1.17	1.03	C	7.54	25.90	
2	0	2	3.6		-.30	-.33	-.72	-.77		3.50	15.00	2 + 5
0	0	3	5.5		-.64	-.52	-1.32	-1.07		1.00	12.33	
TOTAL		55										

ITEM NUMBER 3

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	52	94.5	C	.64	.52	1.16	.94	C	7.38	25.48	
2	0	1	1.8		-.42	-.28	-1.27	-.83		.00	13.00	1 + 6
0	0	2	3.6		-.48	-.43	-1.12	-1.01		1.50	12.00	
TOTAL		55										

ITEM NUMBER 4

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	49	89.1	C	.73	.63	1.16	1.01	C	7.61	26.04	
2	0	3	5.5		-.50	-.42	-1.03	-.87		2.33	14.67	7 + 2
0	0	3	5.5		-.50	-.45	-1.03	-.92		2.33	14.00	
TOTAL		55										

ITEM NUMBER 5

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	43	78.2	C	.79	.71	1.10	.98	C	7.98	26.91	
2	0	9	16.4		-.57	-.51	-.86	-.77		4.11	18.11	2 + 6
0	0	3	5.5		-.50	-.45	-1.03	-.92		2.33	14.00	
TOTAL		55										

TEST NO 2 ACHIEVEMENT MONITORING, INST, K SUBTEST 2 FACTS SPEED - ADDITION

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	43	78.2	C	.52	.38	.72	.53	C	7.65	25.93	
2	0	10	18.2		-.49	-.37	-.71	-.53		4.70	20.30	3 + 5
0	0	2	3.6		-.13	-.09	-.31	-.22		5.50	22.00	
TOTAL		55										

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	28	50.9	C	.74	.58	.93	.73	C	8.68	28.04	
2	0	13	23.6		-.46	-.41	-.64	-.56		5.15	20.54	4 + 8
0	0	14	25.5		-.40	-.27	-.54	-.36		5.50	22.14	
TOTAL		55										

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	36	65.5	C	.74	.68	.95	.88	C	8.25	27.61	
2	0	8	14.5		-.37	-.46	-.57	-.71		5.00	18.37	3 + 7
0	0	11	20.0		-.55	-.41	-.79	-.58		4.55	20.09	
TOTAL		55										

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	33	60.0	C	.75	.68	.96	.87	C	8.42	27.97	
2	0	8	14.5		-.30	-.31	-.47	-.47		5.37	20.50	5 + 9
0	0	14	25.5		-.60	-.52	-.82	-.71		4.71	19.64	
TOTAL		55										

ADMINISTRATION TIME: S3

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 2 ACHIEVEMENT MONITORING, INST, K SUBTEST 3 FACTS SPEED - SUBTRACTION

ITEM NUMBER 1

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	ITEM DESCRIPTIONS
C 1	1	49	89,1	C	,68	,59	1,08	,95	C	6,53	25,96	
2	0	4	7,3		-,51	-,48	-,97	-,89		1,25	15,00	
0	0	2	3,6		-,41	-,33	-,97	-,77		,50	15,00	7 - 1
TOTAL		55										

ITEM NUMBER 2

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	45	81,8	C	,65	,60	,94	,86	C	6,71	26,38	
2	0	5	9,1		-,51	-,45	-,90	-,79		1,80	16,60	
0	0	5	9,1		-,36	-,35	-,64	-,61		3,00	18,40	8 - 4
TOTAL		55										

ITEM NUMBER 3

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	40	72,7	C	,67	,62	,90	,83	C	6,97	26,95	
2	0	7	12,7		-,33	-,47	-,53	-,75		3,71	17,71	
0	0	8	14,5		-,53	-,34	-,82	-,53		2,62	20,00	9 - 5
TOTAL		55										

ITEM NUMBER 4

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	38	69,1	C	,75	,66	,98	,87	C	7,21	27,32	
2	0	7	12,7		-,31	-,34	-,50	-,55		3,86	19,57	
0	0	10	18,2		-,63	-,50	-,93	-,73		2,50	18,70	7 - 4
TOTAL		55										

ITEM NUMBER 5

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	36	65,5	C	,74	,61	,96	,78	C	7,31	27,31	
2	0	6	10,9		-,45	-,35	-,75	-,58		2,67	19,00	
0	0	13	23,6		-,50	-,42	-,69	-,58		3,62	20,38	8 - 6
TOTAL		55										

TEST NO 2 ACHIEVEMENT MONITORING, INST, K SUBTEST 3 FACTS SPEED - SUBTRACTION

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	45	81,8	C	,50	,32	,73	,47	C	6,53	25,64	
2	0	6	10,9		-,31	-,18	-,52	-,30		3,67	21,83	4 - 3
0	0	4	7,3		-,38	-,27	-,71	-,50		2,50	19,25	
TOTAL		55										

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	39	70,9	C	,61	,54	,81	,71	C	6,92	26,74	
2	0	11	20,0		-,48	-,47	-,69	-,67		3,45	19,36	11 - 2
0	0	5	9,1		-,29	-,20	-,51	-,34		3,60	21,20	
TOTAL		55										

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	17	30,9	C	,68	,62	,89	,82	C	8,53	30,12	
2	0	9	16,4		-,33	-,38	-,50	-,57		4,00	19,78	13 - 8
0	0	29	52,7		-,38	-,29	-,48	-,37		5,00	23,17	
TOTAL		55										

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	17	30,9	C	,65	,60	,85	,79	C	8,41	29,94	
2	0	10	18,2		-,21	-,27	-,30	-,39		4,80	21,50	12 - 7
0	0	28	50,9		-,44	-,35	-,55	-,44		4,82	22,79	
TOTAL		55										

ITEM NUMBER 1

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	59	98.3	C	.16	.18	.33	.35	C	10.73	24.66
2	0	0	.0		.00	.00	.00	.00		.00	.00
3	0	1	1.7		-.16	-.18	-.51	-.54		8.00	19.00
4	0	0	.0		.00	.00	.00	.00		.00	.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		60									

ITEM DESCRIPTIONS

Numerousness 0-10

ITEM NUMBER 2

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	0	.0		.00	.00	.00	.00		.00	.00
C 2	1	59	98.3	C	.29	.37	.58	.74	C	10.76	24.76
3	0	1	1.7		-.29	-.37	-.89	-1.13		6.00	13.00
4	0	0	.0		.00	.00	.00	.00		.00	.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		60									

Numerousness 11-20

ITEM NUMBER 3

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	3	5.0		-.25	-.22	-.54	-.46		8.33	20.67
C 2	1	52	86.7	C	.54	.42	.83	.65	C	11.13	25.25
3	0	0	.0		.00	.00	.00	.00		.00	.00
4	0	5	8.3		-.47	-.35	-.84	-.63		7.40	19.80
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		60									

Open Sentences Addition 10-18

ITEM NUMBER 4

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	49	81.7	C	.46	.45	.66	.65	C	11.14	25.45
2	0	5	8.3		-.35	-.41	-.64	-.74		8.20	19.00
3	0	5	8.3		-.21	-.13	-.38	-.23		9.20	22.80
4	0	1	1.7		-.16	-.21	-.51	-.64		8.00	18.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		60									

Open Sentences Subtraction 0-9

TEST NO 3 ACHIEVEMENT MONITORING, INST. L SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 5

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	0	.0		.00	.00	.00	.00		.00	.00
2	0	8	13.3		-.57	-.42	-.89	-.67		7.62	20.12
C 3	1	51	85.0	C	.62	.43	.93	.65	C	11.24	25.31
4	0	1	1.7		-.23	-.08	-.70	-.25		7.00	22.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		60									

Problem Solving
Add-part part whole 11-15

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C 1	1	58	96.7	C	.24	.32	.45	.62	C	10.78	24.81
2	0	1	1.7		-.29	-.37	-.89	-1.13		6.00	13.00
3	0	0	.0		.00	.00	.00	.00		.00	.00
4	0	1	1.7		-.04	-.08	-.13	-.25		10.00	22.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		60									

Problem Solving
Subt-Simple Separating 5-9

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	0	.0		.00	.00	.00	.00		.00	.00
2	0	0	.0		.00	.00	.00	.00		.00	.00
C 3	1	60	100.0	C	.00	.00	.00	.00	C	10.68	24.57
4	0	0	.0		.00	.00	.00	.00		.00	.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		60									

Ordering Sets
One-to-one correspondence

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
1	0	6	10.0		-.03	-.03	-.05	-.06		10.50	24.17
C 2	1	50	83.3	C	.10	.03	.15	.04	C	10.78	24.62
3	0	4	6.7		-.12	-.00	-.23	-.01		9.75	24.50
4	0	0	.0		.00	.00	.00	.00		.00	.00
5	0	0	.0		.00	.00	.00	.00		.00	.00
0	0	0	.0		.00	.00	.00	.00		.00	.00
TOTAL		60									

Ordering Numbers 0-20

TEST NO 3 ACHIEVEMENT MONITORING, INST, L SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 9

	OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
	1	0	15	25.0		.10	.08	.14	.11		11.07	25.13
C	2	1	26	43.3	C	.31	.24	.38	.30	C	11.42	25.69
	3	0	4	6.7		-.09	.04	-.17	.09		10.00	25.25
	4	0	15	25.0		-.40	-.38	-.55	-.52		9.20	21.87
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		60									

Sentence Writing (A)
Subt- comparison11-15

ITEM NUMBER 10

	OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
	1	0	2	3.3		-.10	-.07	-.25	-.17		9.50	23.00
	2	0	4	6.7		-.31	-.31	-.59	-.60		8.25	19.75
C	3	1	53	88.3	C	.44	.43	.69	.68	C	11.02	25.21
	4	0	0	.0		.00	.00	.00	.00		.00	.00
	5	0	1	1.7		-.35	-.37	-1.08	-1.13		5.00	13.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		60									

Sentence Writing (A)
Add-part part whole 5-9

ITEM NUMBER 11

	OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
	1	0	2	3.3		-.24	-.18	-.57	-.44		8.00	20.50
	2	0	31	51.7		-.13	-.11	-.16	-.14		10.42	24.13
C	3	1	11	18.3	C	.54	.46	.79	.67	C	13.09	28.55
	4	0	16	26.7		-.23	-.20	-.31	-.27		9.87	23.19
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		60									

Sentence Writing (B)
Subt-join-addend 11-15

ITEM NUMBER 12

	OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
	1	0	21	35.0		-.24	-.33	-.30	-.43		10.00	22.71
C	2	1	18	30.0	C	.56	.46	.74	.60	C	12.50	27.44
	3	0	6	10.0		-.11	-.03	-.18	-.06		10.00	24.17
	4	0	15	25.0		-.26	-.10	-.35	-.13		9.73	23.87
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		60									

Sentence Writing (B)
Subt-part part whole-addend 0-99

TEST NO 3 ACHIEVEMENT MONITORING, INST. L SUBTEST 1 OBJECTIVES TEST

ITEM NUMBER 13

	OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
	1	0	13	21.7		-.27	-.19	-.37	-.27		9.62	23.08
	2	0	7	11.7		-.09	-.01	-.15	-.02		10.14	24.43
C	3	1	33	55.0	C	.28	.14	.35	.18	C	11.21	25.09
	4	0	7	11.7		.01	.04	.01	.06		10.71	25.00
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		60									

Counting Back 9-18

ITEM NUMBER 14

	OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
C	1	1	27	45.0	C	.42	.47	.53	.59	C	11.67	26.70
	2	0	15	25.0		-.11	-.22	-.15	-.30		10.27	23.00
	3	0	10	16.7		-.23	-.22	-.34	-.34		9.60	22.50
	4	0	8	13.3		-.22	-.16	-.35	-.25		9.50	22.87
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		60									

Counting On 18-31

ITEM NUMBER 15

	OPTION	WT	N	P		COEFFICIENTS OF COR LATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT
	1	0	8	13.3		-.17	-.21	-.27	-.33		9.75	22.37
C	2	1	35	58.3	C	.59	.54	.75	.68	C	11.74	26.43
	3	0	8	13.3		-.22	-.13	-.35	-.20		9.50	23.25
	4	0	9	15.0		-.44	-.42	-.68	-.64		8.44	20.44
	5	0	0	.0		.00	.00	.00	.00		.00	.00
	0	0	0	.0		.00	.00	.00	.00		.00	.00
	TOTAL		60									

Counting On 9-18

TEST NO 3 ACHIEVEMENT MONITORING, INST. L SUBTEST 2 FACTS SPEED - ADDITION

ITEM NUMBER 1

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	ITEM DESCRIPTIONS
C 1	1	54	90.0	C	.48	.18	.78	.29	C	7.89	24.81	
2	0	3	5.0		-.47	-.12	-1.00	-.26		4.33	22.33	2 + 4
0	0	3	5.0		-.19	-.12	-.39	-.26		6.33	22.33	
TOTAL		60										

ITEM NUMBER 2

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	49	81.7	C	.62	.53	.89	.76	C	8.10	25.59	
2	0	7	11.7		-.44	-.34	-.71	-.56		5.71	20.71	6 + 3
0	0	4	6.7		-.40	-.38	-.77	-.73		5.25	18.75	
TOTAL		60										

ITEM NUMBER 3

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	54	90.0	C	.44	.19	.72	.32	C	7.87	24.83	
2	0	5	8.3		-.36	-.17	-.62	-.31		5.80	22.20	5 + 2
0	0	1	1.7		-.30	-.08	-.91	-.25		4.00	22.00	
TOTAL		60										

ITEM NUMBER 4

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	49	81.7	C	.67	.48	.97	.70	C	8.14	25.51	
2	0	7	11.7		-.44	-.35	-.71	-.58		5.71	20.57	2 + 3
0	0	4	6.7		-.48	-.30	-.93	-.57		4.75	20.00	
TOTAL		60										

ITEM NUMBER 5

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	58	96.7	C	.42	.23	.81	.44	C	7.76	24.74	
2	0	0	.0		.00	.00	.00	.00		.00	.00	5 + 0
0	0	2	3.3		-.42	-.23	-1.02	-.55		4.00	19.50	
TOTAL		60										

TEST NO 3 ACHIEVEMENT MONITORING, INST, L SUBTEST 2 FACTS SPEED - ADDITION

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	59	98,3	C	,21	,21	,43	,42	C	7,68	24,68	
2	0	0	,0		,00	,00	,00	,00		,00	,00	
0	0	1	1,7		-,21	-,21	-,66	-,64		5,00	18,00	1 + 3
TOTAL		60										

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	56	93,3	C	,48	,59	,84	1,03	C	7,84	25,21	
2	0	3	5,0		-,42	-,55	-,90	-1,17		4,67	14,67	
0	0	1	1,7		-,21	-,21	-,66	-,64		5,00	18,00	9 + 2
TOTAL		60										

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	44	73,3	C	,61	,45	,82	,60	C	8,23	25,68	
2	0	7	11,7		-,18	-,19	-,29	-,31		6,86	22,43	
0	0	9	15,0		-,60	-,39	-,92	-,59		5,33	20,78	6 + 6
TOTAL		60										

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	35	58,3	C	,67	,52	,85	,66	C	8,54	26,37	
2	0	10	16,7		-,20	,03	-,31	,04		6,90	24,80	
0	0	15	25,0		-,59	-,61	-,80	-,84		6,00	20,20	4 + 7
TOTAL		60										

ADMINISTRATION TIME: 53

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 3 ACHIEVEMENT MONITORING, INST, L SUBTEST 3 FACTS SPEED - SUBTRACTION

ITEM NUMBER 1

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	ITEM DESCRIPTIONS
C 1	1	59	98.3	C	.36	.11	.72	.23	C	6.32	24.63	
2	0	1	1.7		-.36	-.11	-1.11	-.35		2.00	21.00	3 - 2
0	0	0	.0		.00	.00	.00	.00		.00	.00	
TOTAL		60										

ITEM NUMBER 2

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	52	86.7	C	.57	.34	.88	.52	C	6.60	25.12	
2	0	4	6.7		-.43	-.39	-.83	-.76		3.75	18.50	
0	0	4	6.7		-.35	-.07	-.67	-.13		4.25	23.50	6 - 4
TOTAL		60										

ITEM NUMBER 3

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	57	95.0	C	.33	.24	.61	.43	C	6.37	24.79	
2	0	1	1.7		-.11	-.14	-.33	-.45		5.00	20.00	
0	0	2	3.3		-.33	-.18	-.80	-.44		3.50	20.50	9 - 1
TOTAL		60										

ITEM NUMBER 4

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	45	75.0	C	.64	.54	.87	.73	C	6.82	25.84	
2	0	9	15.0		-.46	-.35	-.71	-.54		4.56	21.11	
0	0	6	10.0		-.38	-.36	-.65	-.61		4.50	20.17	7 - 3
TOTAL		60										

ITEM NUMBER 5

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	60	100.0	C	.00	.00	.00	.00	C	6.25	24.57	
2	0	0	.0		.00	.00	.00	.00		.00	.00	
0	0	0	.0		.00	.00	.00	.00		.00	.00	6 - 1
TOTAL		60										

TEST NO 3 ACHIEVEMENT MONITORING, INST, L SUBTEST 3 FACTS SPEED - SUBTRACTION

ITEM NUMBER 6

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	44	73,3	C	,63	,39	,85	,52	C	6,84	25,52	
2	0	9	15,0		-,49	-,26	-,75	-,40		4,44	22,00	7 - 5
0	0	7	11,7		-,33	-,24	-,54	-,39		4,86	21,86	
TOTAL		60										

ITEM NUMBER 7

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	39	65,0	C	,53	,44	,68	,57	C	6,85	25,90	
2	0	8	13,3		-,35	-,21	-,55	-,33		4,87	22,37	10 - 4
0	0	13	21,7		-,32	-,34	-,45	-,47		5,31	21,92	
TOTAL		60										

ITEM NUMBER 8

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	11	18,3	C	,59	,47	,86	,68	C	8,18	28,64	
2	0	13	21,7		-,22	-,13	-,30	-,18		5,62	23,54	13 - 9
0	0	36	60,0		-,29	-,26	-,36	-,33		5,89	23,69	
TOTAL		60										

ITEM NUMBER 9

OPTION	WT	N	P		COEFFICIENTS OF CORRELATION PB-ST	PB-TT	B-ST	B-TT		MEANS ST	TT	
C 1	1	8	13,3	C	,57	,41	,90	,65	C	8,50	28,87	
2	0	12	20,0		-,22	-,10	-,31	-,14		5,58	23,75	14 - 8
0	0	40	66,7		-,23	-,21	-,30	-,27		6,00	23,95	
TOTAL		60										

Appendix C

PERFORMANCE BY OBJECTIVE

FOR THE THREE SCHOOLS AND EIGHT CLASSES

NOTE: For those objectives for which there are three items, the number of subjects represented in the proportion correct at a particular test time is ascertained simply by summing the N's for the three forms; however, when there are more or less than three items, the N is increased or decreased proportionately.

Table C4

Table C1

PROGRESS TOWARD OBJECTIVES ACROSS ADMINISTRATION TIMES AS REPRESENTED BY PROPORTION OF STUDENTS ANSWERING ITEMS CORRECTLY FOR: SCHOOL 1

Description of Objectives	Objective					Composite Objective				
		Administration Time					Administration Time			
	Number of Items	Base-line	S-1	S-2	S-3	Number of Items	Base-line	S-1	S-2	S-3
Numerousness										
0-10	3	97.3	96.0	98.7	98.7					
11-20	3	90.5	87.8	98.7	98.7	6	93.9	91.9	98.7	98.7
Ordering										
sets, one-to-one correspondence	3	93.2	93.2	93.2	97.3					
numbers 0-20	3	79.7	90.5	89.2	93.3	6	86.4	91.9	91.2	95.3
Open Sentences										
add 0-20	3	32.4	51.4	77.0	81.3					
subt 0-20	3	21.6	43.2	77.0	84.0					
$\pm$ 0-10	4	33.7	53.6	80.8	80.0					
$\pm$ 11-20	2	14.0	35.3	69.4	88.0	6	27.0	47.3	77.0	82.7
Problem-Solving 0-20 (Set A)										
subt-simple separating	2	65.3	71.4	83.7	92.0					
add-part part whole	2	68.0	86.3	83.7	94.0					
subt-comparison	2	34.7	33.3	50.0	54.0					
5-9	3	68.9	77.0	83.8	82.7					
11-15	3	43.2	51.4	60.8	77.3	6	56.1	64.2	72.3	80.0
Sentence-Writing 0-20 (Set A)										
subt-simple separating	2	26.5	77.1	88.0	86.0					
add-part part whole	2	30.6	75.5	87.8	98.0					
subt-comparison	2	16.0	7.8	40.8	50.0					
5-9	3	28.4	59.5	77.0	77.3					
11-15	3	20.3	45.9	67.6	78.7	6	24.3	52.7	72.3	78.0

Table C1 (Continued)

Description of Objectives	Objective					Composite Objective				
		Administration Time					Administration Time			
	Number of Items	Base-line	S-1	S-2	S-3	Number of Items	Base-line	S-1	S-2	S-3
Sentence-Writing 0-20 (Set B)										
subt-join-addend	2	12.2	8.2	10.2	8.0					
Subt-part part whole-addend	2	18.0	19.6	24.5	34.0					
add-simple joining	1	32.0	64.0	96.0	100.0					
subt-unknown subtrahend	1	20.8	69.6	68.0	80.0					
11-15	4	18.2	27.3	35.4	42.0					
0-99	2	20.4	38.8	46.9	48.0	6	18.9	31.1	39.2	44.0
Counting (Set A)										
on 9-18	3	59.5	47.3	56.8	61.3					
back 9-18	3	36.5	28.4	41.9	37.3	6	48.0	37.8	49.3	49.3
Counting (Set B)										
on 18-31	2	46.0	43.1	34.7	48.0					
back 18-31	1	29.2	30.4	36.0	32.0	3	40.5	39.2	35.1	42.7
Counting On 9-31	5	54.0	45.6	48.0	56.0					
Counting Back 9-31	4	34.7	28.9	40.4	36.0	9	45.5	38.3	44.6	47.1
Recall of Basic Facts (Speeded Test)										
add 0-20						27	46.4	52.9	65.0	76.3
subt 0-20						27	29.4	38.7	52.9	65.9

		Number of Subjects			
		Base-line	S-1	S-2	S-3
Form J	N=	24	23	25	25
Form K	N=	25	25	25	25
Form L	N=	25	26	24	25

Table C2

PROGRESS TOWARD OBJECTIVES ACROSS ADMINISTRATION TIMES AS REPRESENTED BY PROPORTION OF STUDENTS ANSWERING ITEMS CORRECTLY FOR: SCHOOL 2

Description of Objectives	Objective					Composite Objective				
		Administration Time					Administration Time			
	Number of Items	Base-line	S-1	S-2	S-3	Number of Items	Base-line	S-1	S-2	S-3
Numerousness										
0-10	3	95.2	96.8	98.4	100.0					
11-20	3	93.6	90.5	93.7	95.4	6	94.4	93.7	96.0	97.7
Ordering										
sets, one-to-one correspondence	3	88.7	96.8	95.2	90.8					
numbers 0-20	3	75.8	92.1	96.8	95.4	6	82.3	94.4	96.0	93.1
Open Sentences										
add 0-20	3	33.9	65.1	82.5	72.3					
subt 0-20	3	22.6	36.5	63.5	66.2					
$\pm$ 0-10	4	31.3	58.8	76.5	73.9					
$\pm$ 11-20	2	22.0	34.1	66.7	59.5	6	28.2	50.8	73.0	69.2
Problem-Solving 0-20 (Set A)										
subt-simple separating	2	80.5	90.2	76.2	80.0					
add-part part whole	2	80.5	92.7	100.0	88.1					
subt-comparison	2	31.0	36.4	56.4	60.5					
5-9	3	75.8	77.8	87.3	80.0					
11-15	3	51.6	66.7	69.8	72.3	6	63.7	72.2	78.6	76.2
Sentence-Writing 0-20 (Set A)										
subt-simple separating	2	19.0	68.2	84.6	90.7					
add-part part whole	2	24.4	63.4	78.6	77.8					
subt-comparison	2	17.1	19.5	42.2	38.1					
5-9	3	19.4	50.8	68.3	69.2					
11-15	3	21.0	50.8	66.7	69.2	6	20.2	50.8	67.5	69.2

Table C2 (Continued)

Description of Objectives	Objective					Composite Objective				
		Administration Time					Administration Time			
	Number of Items	Base-line	S-1	S-2	S-3	Number of Items	Base-line	S-1	S-2	S-3
Sentence-Writing 0-20 (Set B)										
subt-join-addend	2	14.6	4.9	4.8	20.0					
Subt-part part whole-addend	2	12.2	17.1	35.6	42.9					
add-simple joining	1	57.1	86.4	85.7	70.0					
subt-unknown subtrahend	1	19.0	45.5	66.7	73.9					
11-15	4	26.5	28.2	35.7	40.0					
0-99	2	12.2	34.2	42.9	53.3	6	21.8	30.2	38.1	44.6
Counting (Set A)										
on 9-18	3	46.8	58.7	68.3	69.2					
back 9-18	3	32.3	28.6	42.9	40.0	6	39.5	43.7	55.6	54.6
Counting (Set B)										
on 18-31	2	39.0	39.0	51.1	45.2					
back 18-31	1	38.1	31.8	33.3	30.4	3	38.7	36.5	46.0	40.0
Counting On 9-31	5	43.7	51.0	61.1	59.8					
Counting Back 9-31	4	33.7	29.4	40.7	37.5	9	39.2	41.3	52.4	49.7
Recall of Basic Facts (Speeded Test)										
add 0-20						27	49.6	58.0	72.3	75.7
subt 0-20						27	35.1	46.2	52.4	59.3

		Number of Subjects			
		Base-line	S-1	S-2	S-3
Form J	N=	21	22	18	23
Form K	N=	21	22	21	20
Form L	N=	20	19	24	22

Table C3

PROGRESS TOWARD OBJECTIVES ACROSS ADMINISTRATION TIMES AS REPRESENTED BY PROPORTION OF STUDENTS ANSWERING ITEMS CORRECTLY FOR: SCHOOL 3

Description of Objectives	Objective					Composite Objective				
		Administration Time					Administration Time			
	Number of Items	Base-line	S-1	S-2	S-3	Number of Items	Base-line	S-1	S-2	S-3
Numerousness										
0-10	3	100.0	96.8	100.0	100.0					
11-20	3	97.1	100.0	94.3	100.0	6	98.6	98.4	97.1	100.0
Ordering										
sets, one-to-one correspondence	3	88.6	100.0	100.0	100.0					
numbers 0-20	3	80.0	93.6	100.0	91.4	6	84.3	96.8	100.0	95.7
Open Sentences										
add 0-20	3	40.0	74.2	77.1	91.4					
subt 0-20	3	8.6	48.4	57.1	77.1					
± 0-10	4	17.0	65.9	82.6	85.1					
± 11-20	2	39.1	52.4	37.5	82.6	6	24.3	61.3	67.1	84.3
Problem-Solving 0-20 (Set A)										
subt-simple separating	2	54.2	85.0	91.3	92.0					
add-part part whole	2	91.3	90.5	83.3	91.3					
subt-comparison	2	78.3	61.9	65.2	95.5					
5-9	3	85.7	83.9	91.4	100.0	6	74.3	79.0	80.0	92.9
11-15	3	62.9	74.2	68.6	85.7					
Sentence-Writing 0-20 (Set A)										
subt-simple separating	2	13.0	71.4	78.3	90.9					
add-part part whole	2	58.3	70.0	78.3	92.0					
subt-comparison	2	17.4	4.8	29.2	52.2					
5-9	3	42.9	54.8	71.4	85.7					
11-15	3	17.1	41.9	51.4	71.4	6	30.0	48.4	61.4	78.6

Table C3 (Continued)

Description of Objectives	Objective					Composite Objective				
		Administration Time					Administration Time			
	Number of Items	Base-line	S-1	S-2	S-3	Number of Items	Base-line	S-1	S-2	S-3
Sentence-Writing 0-20 (Set B)										
subt-join-addend	2	4.2	0.0	0.0	20.0					
Subt-part part whole-addend	2	21.7	28.6	41.7	69.6					
add-simple joining	1	54.6	81.8	91.7	90.0					
subt-unknown subtrahend	1	8.3	70.0	63.6	58.3					
11-15	4	21.7	31.0	36.2	51.1					
0-99	2	12.5	45.0	47.8	56.0	6	18.6	35.5	40.0	52.9
Counting (Set A)										
on 9-18	3	60.0	74.2	71.4	88.6					
back 9-18	3	37.1	45.2	42.9	48.6	6	48.6	59.7	57.1	68.6
Counting (Set B)										
on 18-31	2	43.5	42.9	33.3	73.9					
back 18-31	1	0.0	40.0	63.6	33.3	3	28.6	41.9	42.9	60.0
Counting On 9-31	5	53.5	61.5	55.9	82.8					
Counting Back 9-31	4	27.7	43.9	47.8	44.9	9	41.9	53.7	52.4	65.7
Recall of Basic Facts (Speeded Test)										
add 0-20						27	61.6	60.9	71.1	81.6
subt 0-20						27	34.3	53.4	61.6	72.4

		Number of Subjects			
		Base-line	S-1	S-2	S-3
Form J	N=	12	10	11	12
Form K	N=	11	11	12	10
Form L	N=	12	10	12	13

Table C4

PROGRESS TOWARD OBJECTIVES ACROSS ADMINISTRATION TIMES AS REPRESENTED BY PROPORTION OF STUDENTS ANSWERING ITEMS CORRECTLY FOR:
CLASS 1

Description of Objectives	Objective					Composite Objective				
		Administration Time					Administration Time			
	Number of Items	Base-line	S-1	S-2	S-3	Number of Items	Base-line	S-1	S-2	S-3
Numerousness										
0-10	3	100.0	100.0	100.0	96.3					
11-20	3	88.0	87.0	96.2	100.0	6	94.0	93.5	98.1	98.2
Ordering										
sets, one-to-one correspondence	3	96.0	95.7	92.3	96.3					
numbers 0-20	3	76.0	100.0	80.8	92.6	6	86.0	97.8	86.5	94.4
Open Sentences										
add 0-20	3	20.0	39.1	76.9	77.8					
subt 0-20	3	24.0	39.1	88.5	77.8					
$\pm$ 0-10	4	31.3	40.0	85.7	74.3					
$\pm$ 11-20	2	5.6	37.5	76.5	84.2	6	22.0	39.1	82.7	77.8
Problem-Solving 0-20 (Set A)										
subt-simple separating	2	56.3	62.5	88.2	88.2					
add-part part whole	2	55.6	75.0	76.5	94.7					
subt-comparison	2	25.0	21.4	50.0	61.1					
5-9	3	64.0	65.2	84.6	88.9					
11-15	3	28.0	43.5	57.7	74.1	6	46.0	54.4	71.2	81.5
Sentence-Writing 0-20 (Set A)										
subt-simple separating	2	6.3	71.4	83.3	83.3					
add-part part whole	2	18.8	75.0	94.1	100.0					
subt-comparison	2	16.7	0.0	29.4	47.4					
5-9	3	20.0	56.5	73.1	77.8					
11-15	3	8.0	39.1	65.4	74.1	6	14.0	47.8	69.2	75.9

Table C4 (Continued)

Description of Objectives	Objective					Composite Objective				
		Administration Time					Administration Time			
	Number of Items	Base-line	S-1	S-2	S-3	Number of Items	Base-line	S-1	S-2	S-3
Sentence-Writing 0-20 (Set B)										
subt-join-addend	2	18.8	62.5	0.0	58.8					
Subt-part part whole-addend	2	5.6	12.5	17.7	26.3					
add-simple joining	1	11.1	71.4	88.9	100.0					
subt-unknown subtrahend	1	0.0	100.0	77.8	100.0					
11-15	4	11.8	23.3	25.7	43.2					
0-99	2	6.3	50.0	52.9	47.1	6	10.0	32.6	34.6	44.4
Counting (Set A)										
on 9-18	3	56.0	30.4	50.0	66.7					
back 9-18	3	36.0	34.8	38.5	40.7	6	46.0	32.6	44.2	53.7
Counting (Set B)										
on 18-31	2	44.4	31.3	11.8	26.3					
back 18-31	1	14.3	57.1	55.6	25.0	3	36.0	39.1	26.9	25.9
Counting On 9-31	5	51.2	30.8	34.9	50.0					
Counting Back 9-31	4	31.2	40.0	42.9	37.1	9	42.7	34.8	38.5	44.4
Recall of Basic Facts (Speeded Test)										
add 0-20						27	41.3	52.2	64.1	76.1
subt 0-20						27	27.1	37.2	53.9	63.8

		Number of Subjects			
		Base-line	S-1	S-2	S-3
Form J	N=	7	7	9	8
Form K	N=	9	7	9	10
Form L	N=	9	9	8	9

Table C5

PROGRESS TOWARD OBJECTIVES ACROSS ADMINISTRATION TIMES AS REPRESENTED BY PROPORTION OF STUDENTS ANSWERING ITEMS CORRECTLY FOR:

CLASS 2

Description of Objectives	Objective					Composite Objective				
		Administration Time					Administration Time			
	Number of Items	Base-line	S-1	S-2	S-3	Number of Items	Base-line	S-1	S-2	S-3
Numerousness										
0-10	3	93.8	100.0	100.0	100.0					
11-20	3	100.0	85.0	88.9	94.7	6	96.9	92.5	94.4	97.4
Ordering										
sets, one-to-one correspondence	3	100.0	100.0	100.0	94.7					
numbers 0-20	3	93.8	95.0	100.0	94.7	6	96.9	97.5	100.0	94.7
Open Sentences										
add 0-20	3	68.8	75.0	88.9	89.5					
subt 0-20	3	43.8	45.0	83.3	84.2					
$\pm$ 0-10	4	66.7	69.2	81.8	85.2					
$\pm$ 11-20	2	36.4	42.9	92.9	90.9	6	56.3	60.0	86.1	86.8
Problem-Solving 0-20 (Set A)										
subt-simple separating	2	90.0	91.7	83.3	85.7					
add-part part whole	2	90.9	92.9	100.0	100.0					
subt-comparison	2	36.4	57.1	90.0	84.6					
5-9	3	87.5	95.0	94.4	89.5					
11-15	3	56.3	65.0	88.9	89.5	6	71.9	80.0	91.7	89.5
Sentence-Writing 0-20 (Set A)										
subt-simple separating	2	36.4	85.7	90.0	92.3					
add-part part whole	2	30.0	75.0	75.0	71.4					
subt-comparison	2	0.0	35.7	71.4	36.4					
5-9	3	12.5	60.0	83.3	68.4					
11-15	3	31.3	70.0	72.2	68.4	6	21.9	65.0	77.8	68.4

Table C5 (Continued)

Description of Objectives	Objective				Composite Objective				
		Administration Time				Administration Time			
	Number of Items	Base-line	S-1	S-2	S-3	Number of Items	Base-line	S-1	S-2	S-3
Sentence-Writing 0-20 (Set B)										
subt-join-addend	2	10.0	83.3	0.0	42.9					
Subt-part part whole-addend	2	0.0	28.6	64.3	36.4					
add-simple joining	1	66.7	100.0	100.0	80.0					
subt-unknown subtrahend	1	20.0	33.3	75.0	75.0					
11-15	4	22.7	35.7	45.8	45.8					
0-99	2	10.0	41.7	58.3	64.3	6	18.8	37.5	50.0	52.6
Counting (Set A)										
on 9-18	3	62.5	80.0	77.8	84.2					
back 9-18	3	68.8	20.0	38.9	47.4	6	65.6	50.0	58.3	65.8
Counting (Set B)										
on 18-31	2	72.7	64.3	78.6	72.7					
back 18-31	1	40.0	50.0	0.0	37.5	3	62.5	60.0	61.1	57.9
Counting On 9-31	5	66.7	73.5	78.1	80.0					
Counting Back 9-31	4	61.9	26.9	31.8	44.4	9	64.6	50.0	59.3	63.2
Recall of Basic Facts (Speeded Test)										
add 0-20						27	84.0	76.7	88.3	84.8
subt 0-20						27	59.0	62.8	65.4	72.5

		Number of Subjects			
		Base-line	S-1	S-2	S-3
Form J	N=	5	6	4	8
Form K	N=	6	8	6	5
Form L	N=	5	6	8	6

Table C6

PROGRESS TOWARD OBJECTIVES ACROSS ADMINISTRATION TIMES AS REPRESENTED BY PROPORTION OF STUDENTS ANSWERING ITEMS CORRECTLY FOR: CLASS 3

Description of Objectives	Objective					Composite Objective				
		Administration Time					Administration Time			
	Number of Items	Base-line	S-1	S-2	S-3	Number of Items	Base-line	S-1	S-2	S-3
Numerousness										
0-10	3	100.0	100.0	100.0	100.0					
11-20	3	100.0	100.0	100.0	100.0	6	100.0	100.0	100.0	100.0
Ordering										
sets, one-to-one correspondence	3	100.0	100.0	100.0	100.0					
numbers 0-20	3	87.5	100.0	100.0	100.0	6	93.8	100.0	100.0	100.0
Open Sentences										
add 0-20	3	50.0	85.7	88.2	87.5					
subt 0-20	3	12.5	42.9	64.7	75.0					
$\pm$ 0-10	4	27.3	76.4	95.7	77.3					
$\pm$ 11-20	2	40.0	45.5	36.4	90.0	6	31.3	64.3	76.5	81.3
Problem-Solving 0-20 (Set A)										
subt-simple separating	2	30.0	77.8	91.7	100.0					
add-part part whole	2	90.0	90.9	90.9	90.0					
subt-comparison	2	83.3	37.5	81.8	100.0					
5-9	3	87.5	85.7	94.1	100.0					
11-15	3	50.0	57.1	82.4	93.8	6	68.8	71.4	88.2	96.9
Sentence-Writing 0-20 (Set A)										
subt-simple separating	2	16.7	75.0	63.6	90.9					
add-part part whole	2	60.0	88.9	75.0	90.9					
subt-comparison	2	20.0	0.0	27.3	40.0					
5-9	3	43.8	64.3	70.6	75.0					
11-15	3	18.8	35.7	41.2	75.0	6	31.3	50.0	55.9	75.0

Table C6 (Continued)

Description of Objectives	Objective					Composite Objective				
		Administration Time					Administration Time			
	Number of Items	Base-line	S-1	S-2	S-3	Number of Items	Base-line	S-1	S-2	S-3
Sentence-Writing 0-20 (Set B)										
subt-join-addend	2	0.0	0.0	0.0	18.2					
Subt-part part whole-addend	2	20.0	9.1	27.3	80.0					
add-simple joining	1	83.3	80.0	100.0	100.0					
subt-unknown subtrahend	1	0.0	100.0	50.0	66.7					
11-15	4	27.3	21.1	31.8	57.1					
0-99	2	10.0	44.4	33.3	63.6	6	21.9	28.6	32.4	59.4
Counting (Set A)										
on 9-18	3	68.8	78.6	70.6	93.8					
back 9-18	3	50.0	50.0	29.4	31.3	6	59.4	64.3	50.0	62.5
Counting (Set B)										
on 18-31	2	50.0	27.3	27.3	80.0					
back 18-31	1	0.0	33.3	66.7	50.0	3	31.3	28.6	41.2	68.8
Counting On 9-31	5	61.5	56.0	53.6	88.5					
Counting Back 9-31	4	36.4	47.1	39.1	36.4	9	50.0	52.4	47.1	64.6
Recall of Basic Facts (Speeded Test)										
add 0-20						27	59.0	64,3	75.2	80.6
subt 0-20						27	44.4	51.6	63.4	68.8

		Number of Subjects			
		Base-line	S-1	S-2	S-3
Form J	N=	6	3	6	6
Form K	N=	6	5	5	5
Form L	N=	4	6	6	5

Table C7

PROGRESS TOWARD OBJECTIVES ACROSS ADMINISTRATION TIMES AS REPRESENTED BY PROPORTION OF STUDENTS ANSWERING ITEMS CORRECTLY FOR: CLASS 4

Description of Objectives	Objective					Composite Objective				
		Administration Time					Administration Time			
	Number of Items	Base-line	S-1	S-2	S-3	Number of Items	Base-line	S-1	S-2	S-3
Numerousness										
0-10	3	100.0	96.6	100.0	100.0					
11-20	3	100.0	93.1	100.0	100.0	6	100.0	94.8	100.0	100.0
Ordering										
sets, one-to-one correspondence	3	96.4	100.0	100.0	100.0					
numbers 0-20	3	92.9	96.6	100.0	92.9	6	94.6	98.3	100.0	96.4
Open Sentences										
add 0-20	3	53.6	79.3	89.3	92.9					
subt 0-20	3	17.9	69.0	89.3	92.9					
± 0-10	4	44.4	84.6	89.5	91.7					
± 11-20	2	20.0	52.6	88.9	95.0	6	35.7	74.1	89.3	92.9
Problem-Solving 0-20 (Set A)										
subt-simple separating	2	77.8	85.0	88.9	100.0					
add-part part whole	2	80.0	94.7	88.9	95.0					
subt-comparison	2	61.1	52.6	65.0	72.2					
5-9	3	89.3	86.2	85.7	92.9					
11-15	3	57.1	69.0	75.0	85.7	6	73.2	77.6	80.4	89.3
Sentence-Writing 0-20 (Set A)										
subt-simple separating	2	55.6	89.5	95.0	100.0					
add-part part whole	2	44.4	90.0	100.0	100.0					
subt-comparison	2	10.0	21.1	61.1	70.0					
5-9	3	39.3	72.4	85.7	92.9					
11-15	3	32.1	62.1	85.7	85.7	6	35.7	67.2	85.7	89.3

Table C7 (Continued)

Description of Objectives	Objective					Composite Objective				
		Administration Time					Administration Time			
	Number of Items	Base-line	S-1	S-2	S-3	Number of Items	Base-line	S-1	S-2	S-3
Sentence-Writing 0-20 (Set B)										
subt-join-addend	2	11.1	10.0	55.6	11.1					
Subt-part part whole-addend	2	25.0	21.1	33.3	45.0					
add-simple joining	1	60.0	88.9	100.0	100.0					
subt-unknown subtrahend	1	50.0	60.0	60.0	87.5					
11-15	4	28.9	36.8	39.5	47.4					
0-99	2	33.3	30.0	44.4	55.6	6	30.4	34.5	41.1	50.0
Counting (Set A)										
on 9-18	3	71.4	69.0	67.9	71.4					
back 9-18	3	46.4	37.9	53.6	39.3	6	58.9	53.4	60.7	55.4
Counting (Set B)										
on 18-31	2	50.0	57.9	72.2	65.0					
back 18-31	1	37.5	20.0	30.0	50.0	3	46.4	44.8	57.1	60.7
Counting On 9-31	5	62.5	64.6	69.6	68.7					
Counting Back 9-31	4	44.4	33.3	47.4	41.7	9	54.8	50.6	59.5	57.1
Recall of Basic Facts (Speeded Test)										
add 0-20						27	65.1	70.1	80.2	89.7
subt 0-20						27	43.3	53.3	63.9	76.6

		Number of Subjects			
		Base-line	S-1	S-2	S-3
Form J	N=	8	10	10	8
Form K	N=	10	9	10	10
Form L	N=	10	10	8	10

Table C8

PROGRESS TOWARD OBJECTIVES ACROSS ADMINISTRATION TIMES AS REPRESENTED BY PROPORTION OF STUDENTS ANSWERING ITEMS CORRECTLY FOR:
CLASS 5

Description of Objectives	Objective					Composite Objective				
		Administration Time					Administration Time			
	Number of Items	Base-line	S-1	S-2	S-3	Number of Items	Base-line	S-1	S-2	S-3
Numerousness										
0-10	3	92.0	95.2	96.0	100.0					
11-20	3	84.0	85.7	92.0	92.0	6	88.0	90.5	94.0	96.0
Ordering										
sets, one-to-one correspondence	3	88.0	90.5	88.0	80.0					
numbers 0-20	3	68.0	95.2	92.0	100.0	6	78.0	92.9	90.0	90.0
Open Sentences										
add 0-20	3	12.0	71.4	76.0	64.0					
subt 0-20	3	20.0	14.3	40.0	48.0					
$\pm$ 0-10	4	20.6	50.0	66.7	63.6					
$\pm$ 11-20	2	6.3	28.6	41.2	41.2	6	16.0	42.9	58.0	56.0
Problem-Solving 0-20 (Set A)										
subt-simple separating	2	62.5	85.7	70.6	75.0					
add-part part whole	2	87.5	92.9	100.0	76.5					
subt-comparison	2	33.3	21.4	43.8	35.3					
5-9	3	72.0	71.4	84.0	68.0					
11-15	3	48.0	61.9	60.0	56.0	6	60.0	66.7	72.0	62.0
Sentence-Writing 0-20 (Set A)										
subt-simple separating	2	11.1	57.1	81.3	82.4					
add-part part whole	2	25.0	35.7	76.5	62.5					
subt-comparison	2	37.5	14.3	23.5	17.7					
5-9	3	28.0	47.6	64.0	52.0					
11-15	3	20.0	23.8	56.0	56.0	6	24.0	35.7	60.0	54.0

Table C8 (Continued)

Description of Objectives	Objective					Composite Objective				
		Administration Time					Administration Time			
	Number of Items	Base-line	S-1	S-2	S-3	Number of Items	Base-line	S-1	S-2	S-3
Sentence-Writing 0-20 (Set B)										
subt-join-addend	2	0.0	7.1	11.8	0.0					
Subt-part part whole-addend	2	18.8	7.1	11.8	35.3					
add-simple joining	1	33.3	71.4	87.5	66.7					
subt-unknown subtrahend	1	22.2	14.3	50.0	75.0					
11-15	4	17.6	25.0	33.3	29.4					
0-99	2	12.5	7.1	23.5	50.0	6	16.0	19.0	30.0	36.0
Counting (Set A)										
on 9-18	3	40.0	47.6	56.0	48.0					
back 9-18	3	20.0	33.3	60.0	36.0	6	30.0	40.5	58.0	42.0
Counting (Set B)										
on 18-31	2	31.3	21.4	29.4	29.4					
back 18-31	1	33.3	28.6	50.0	12.5	3	32.0	23.8	36.0	24.0
Counting On 9-31	5	36.6	37.1	45.2	40.5					
Counting Back 9-31	4	23.5	32.1	57.6	30.3	9	30.7	34.9	50.7	36.0
Recall of Basic Facts (Speeded Test)										
add 0-20						27	36.9	45.5	56.0	60.9
subt 0-20						27	28.9	29.1	37.3	43.6

		Number of Subjects			
		Base-line	S-1	S-2	S-3
Form J	N=	9	7	8	8
Form K	N=	9	7	8	9
Form L	N=	7	7	9	8

Table C9

PROGRESS TOWARD OBJECTIVES ACROSS ADMINISTRATION TIMES AS REPRESENTED BY PROPORTION OF STUDENTS ANSWERING ITEMS CORRECTLY FOR: CLASS 6

Description of Objectives	Objective					Composite Objective				
		Administration Time					Administration Time			
	Number of Items	Base-line	S-1	S-2	S-3	Number of Items	Base-line	S-1	S-2	S-3
Numerousness										
0-10	3	100.0	95.5	100.0	100.0					
11-20	3	100.0	100.0	100.0	100.0	6	100.0	97.7	100.0	100.0
Ordering										
sets, one-to-one correspondence	3	81.0	100.0	100.0	100.0					
numbers 0-20	3	71.4	86.4	100.0	90.5	6	76.2	93.2	100.0	95.2
Open Sentences										
add 0-20	3	33.3	50.0	85.0	66.7					
subt 0-20	3	9.5	50.0	75.0	71.4					
$\pm$ 0-10	4	17.9	58.1	84.6	75.0					
$\pm$ 11-20	2	28.6	30.8	71.4	57.1	6	21.4	50.0	80.0	69.1
Problem-Solving 0-20 (Set A)										
subt-simple separating	2	93.3	93.3	76.9	80.0					
add-part part whole	2	64.3	92.3	100.0	92.9					
subt-comparison	2	23.1	31.3	46.2	69.2					
5-9	3	71.4	68.2	85.0	85.7					
11-15	3	52.4	72.7	65.0	76.2	6	61.9	70.5	75.0	81.0
Sentence-Writing 0-20 (Set A)										
subt-simple separating	2	15.4	62.5	84.6	100.0					
add-part part whole	2	20.0	80.0	84.6	100.0					
subt-comparison	2	7.1	76.9	35.7	64.3					
5-9	3	14.3	45.5	60.0	90.5					
11-15	3	14.3	59.1	75.0	85.7	6	14.3	52.3	67.5	88.1

Table C9 (Continued)

Description of Objectives	Objective					Composite Objective				
		Administration Time					Administration Time			
	Number of Items	Base-line	S-1	S-2	S-3	Number of Items	Base-line	S-1	S-2	S-3
Sentence-Writing 0-20 (Set B)										
subt-join-addend	2	33.3	0.0	0.0	20.0					
Subt-part part whole-addend	2	14.3	15.4	35.7	57.1					
add-simple joining	1	83.3	85.7	71.4	66.7					
subt-unknown subtrahend	1	14.3	77.8	83.3	71.4					
11-15	4	40.7	24.1	29.6	48.2					
0-99	2	13.3	53.3	53.9	46.7	6	31.0	34.1	37.5	47.6
Counting (Set A)										
on 9-18	3	42.9	50.0	75.0	81.0					
back 9-18	3	19.1	31.8	25.0	38.1	6	31.0	40.9	50.0	59.5
Counting (Set B)										
on 18-31	2	21.4	30.8	50.0	42.9					
back 18-31	1	42.9	22.2	33.3	42.9	3	28.6	27.3	45.0	42.9
Counting On 9-31	5	34.3	42.9	64.7	65.7					
Counting Back 9-31	4	25.0	29.0	26.9	39.3	9	30.2	36.4	48.3	54.0
Recall of Basic Facts (Speeded Test)										
add 0-20						27	38.6	53.0	78.3	85.2
subt 0-20						27	24.3	47.5	59.4	66.1

		Number of Subjects			
		Base-line	S-1	S-2	S-3
Form J	N=	7	9	6	7
Form K	N=	6	7	7	6
Form L	N=	8	6	7	8

Table C10

PROGRESS TOWARD OBJECTIVES ACROSS ADMINISTRATION TIMES AS REPRESENTED BY PROPORTION OF STUDENTS ANSWERING ITEMS CORRECTLY FOR:
CLASS 7

Description of Objectives	Objective					Composite Objective				
		Administration Time					Administration Time			
	Number of Items	Base-line	S-1	S-2	S-3	Number of Items	Base-line	S-1	S-2	S-3
Numerousness										
0-10	3	90.5	90.9	95.0	100.0					
11-20	3	81.0	81.8	100.0	95.0	6	85.7	86.4	97.5	97.5
Ordering										
sets, one-to-one correspondence	3	85.7	81.8	85.0	95.0					
numbers 0-20	3	66.7	72.7	85.0	95.0	6	76.2	77.3	85.0	95.0
Open Sentences										
add 0-20	3	19.1	27.3	60.0	70.0					
subt 0-20	3	23.8	13.6	45.0	80.0					
± 0-10	4	23.3	25.0	61.5	72.4					
± 11-20	2	16.7	12.5	35.7	81.8	6	21.4	20.5	52.5	75.0
Problem-Solving 0-20 (Set A)										
subt-simple separating	2	60.0	61.5	71.4	86.7					
add-part part whole	2	66.7	87.5	85.7	90.9					
subt-comparison	2	13.3	20.0	25.0	21.4					
5-9	3	47.6	77.3	80.0	60.0					
11-15	3	42.9	36.4	45.0	70.0	6	45.2	56.8	62.5	65.0
Sentence-Writing 0-20 (Set A)										
subt-simple separating	2	13.3	66.7	83.3	71.4					
add-part part whole	2	26.7	53.9	64.3	93.3					
subt-comparison	2	25.0	0.0	28.6	18.2					
5-9	3	23.8	45.5	70.0	55.0					
11-15	3	19.0	31.8	45.0	75.0	6	21.4	38.6	57.5	65.0

Table C10 (Continued)

Description of Objectives	Objective					Composite Objective				
		Administration Time					Administration Time			
	Number of Items	Base-line	S-1	S-2	S-3	Number of Items	Base-line	S-1	S-2	S-3
Sentence-Writing 0-20 (Set B)										
subt-join-addend	2	6.7	7.7	28.6	66.7					
Subt-part part whole-addend	2	25.0	25.0	21.4	27.3					
add-simple joining	1	16.7	33.3	100.0	100.0					
subt-unknown subtrahend	1	11.1	50.0	66.7	55.6					
11-15	4	11.1	19.4	42.3	32.0					
0-99	2	20.0	38.5	42.9	40.0	6	14.3	25.0	42.5	35.0
Counting (Set A)										
on 9-18	3	47.6	36.4	50.0	40.0					
back 9-18	3	23.8	9.1	30.0	30.0	6	35.7	22.7	40.0	35.0
Counting (Set B)										
on 18-31	2	41.7	37.5	14.3	54.6					
back 18-31	1	33.3	16.7	16.7	22.2	3	38.1	31.8	15.0	40.0
Counting On 9-31	5	45.4	36.8	35.3	45.2					
Counting Back 9-31	4	26.7	10.7	26.9	27.6	9	36.5	25.6	31.7	36.7
Recall of Basic Facts (Speeded Test)										
add 0-20						27	27.5	30.8	45.0	57.8
subt 0-20						27	13.8	21.2	36.1	53.9

		Number of Subjects			
		Base-line	S-1	S-2	S-3
Form J	N=	9	6	6	9
Form K	N=	6	9	6	5
Form L	N=	6	7	8	6

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Table C11

PROGRESS TOWARD OBJECTIVES ACROSS ADMINISTRATION TIMES AS REPRESENTED BY PROPORTION OF STUDENTS ANSWERING ITEMS CORRECTLY FOR:
CLASS 8

Description of Objectives	Objective					Composite Objective				
		Administration Time					Administration Time			
	Number of Items	Base-line	S-1	S-2	S-3	Number of Items	Base-line	S-1	S-2	S-3
Numerousness										
0-10	3	100.0	94.1	100.0	100.0					
11-20	3	94.7	100.0	88.9	100.0	6	97.4	97.1	94.4	100.0
Ordering										
sets, one-to-one correspondence	3	79.0	100.0	100.0	100.0					
numbers 0-20	3	73.7	88.2	100.0	84.2	6	76.3	94.1	100.0	92.1
Open Sentences										
add 0-20	3	31.6	64.7	66.7	94.7					
subt 0-20	3	5.3	52.9	50.0	79.0					
± 0-10	4	8.0	58.3	69.6	92.0					
± 11-20	2	38.4	60.0	38.5	76.9	6	18.4	58.8	58.3	86.8
Problem-Solving 0-20 (Set A)										
subt-simple separating	2	71.4	90.9	90.9	85.7					
add-part part whole	2	92.3	90.0	76.9	92.3					
subt-comparison	2	72.7	76.9	50.0	90.9					
5-9	3	84.2	82.4	88.9	100.0					
11-15	3	73.7	88.2	55.6	79.0	6	79.0	85.3	72.2	89.5
Sentence-Writing 0-20 (Set A)										
subt-simple separating	2	9.1	69.2	91.7	90.9					
add-part part whole	2	57.1	54.6	81.8	92.9					
subt-comparison	2	15.4	10.0	30.8	61.5					
5-9	3	42.1	47.1	72.2	94.7					
11-15	3	15.8	47.1	61.1	68.4	6	28.9	47.1	66.7	81.6

Table C11 (Continued)

Description of Objectives	Objective					Composite Objective				
		Administration Time					Administration Time			
	Number of Items	Base-line	S-1	S-2	S-3	Number of Items	Base-line	S-1	S-2	S-3
Sentence-Writing 0-20 (Set B)										
subt-join-addend	2	7.1	0.0	0.0	21.4					
Subt-part part whole-addend	2	23.1	50.0	53.9	61.5					
add-simple joining	1	20.0	83.3	85.7	80.0					
subt-unknown subtrahend	1	16.7	57.1	80.0	50.0					
11-15	4	16.7	39.1	40.0	45.8					
0-99	2	14.3	45.5	63.6	50.0	6	15.8	41.2	47.2	47.4
Counting (Set A)										
on 9-18	3	52.6	70.6	72.2	84.2					
back 9-18	3	26.3	41.2	55.6	63.2	6	39.4	55.9	63.9	73.7
Counting (Set B)										
on 18-31	2	38.4	60.0	38.5	69.2					
back 18-31	1	0.0	42.9	60.0	16.7	3	26.3	52.9	44.4	52.6
Counting On 9-31	5	46.9	66.7	58.1	78.1					
Counting Back 9-31	4	20.0	41.7	56.5	52.0	9	35.1	55.9	57.4	66.7
Recall of Basic Facts (Speeded Test)										
add 0-20						27	63.7	58.2	67.3	82.5
subt 0-20						27	25.7	54.9	59.9	75.4

		Number of Subjects			
		Base-line	S-1	S-2	S-3
Form J	N=	6	7	5	6
Form K	N=	5	6	7	5
Form L	N=	8	4	6	8

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